

**Appendix H: City of Santa Monica Olympic Well Field Restoration and
Arcadia Water Treatment Plant Expansion Project Acceptance Test
Report**

Arcadia Water Treatment Plant Expansion
and Olympic Well Field Restoration Project
Acceptance Test Report

Prepared for
City of Santa Monica
May 2024

Arcadia Water Treatment Plant Expansion and Olympic Well Field Restoration Project Acceptance Test Report

Prepared for
City of Santa Monica
May 2024



18500 Von Karman Avenue, Suite 1100
Irvine, CA 92612
T: 714.730.7600

Table of Contents

Executive Summary	1
UV/AOP Performance Test Performance	1
FRRO Performance Test Performance	2
7-Day Test Operational and Treatment Performance Compliance	3
1. Acceptance Test Overview	1-1
1.1 Overview	1-1
1.2 Compliance Points	1-1
1.3 Confirmation of Execution in Accordance with Acceptance Test Plan	1-7
1.3.1 Olympic AWTF Performance Test	1-7
1.3.2 FRRO Performance Test	1-8
1.3.3 7-day Acceptance Test	1-8
2. Olympic AWTF Performance Test Results	2-1
2.1 Olympic AWTF Performance Test Overview	2-1
2.2 Operational and Performance Test Conditions	2-3
2.3 Source Water Quality Monitoring	2-3
2.4 Greensand Performance Test	2-7
2.4.1 Operational and Performance Results	2-7
2.4.2 Documentation of System or Equipment Failures or Outages	2-7
2.5 UV-AOP Performance Test	2-11
2.5.1 UV-AOP Performance Test Procedures	2-11
2.5.2 Operational and Performance Results	2-12
2.5.3 Recommendations for UV-AOP Operation	2-30
2.5.4 Documentation of System or Equipment Failures or Outages	2-30
2.6 GAC Performance Test	2-30
2.6.1 Operational and Performance Results	2-30
2.6.2 Documentation of System or Equipment Failures or Outages	2-33
2.7 Deviation from Acceptance Test Plan	2-33
2.8 Operational and Treatment Performance Compliance	2-33
3. Flow Reversal Reverse Osmosis Performance Test Results	3-1
3.1 Overview of FRRO Performance Test	3-1
3.2 FRRO Performance Test Results	3-2
3.2.1 Operational Monitoring	3-2
3.2.2 Water Quality Monitoring	3-7
3.2.3 Documentation of System or Equipment Failures or Outages	3-12
3.3 Deviation from Acceptance Test Plan	3-12
3.4 Operational and Treatment Performance Compliance	3-12

4.	7-day Acceptance Test Results.....	4-1
4.1	Overview of 7-day Acceptance Test.....	4-1
4.2	7-Day Acceptance Test Conditions.....	4-3
4.3	Source Water Quality Monitoring.....	4-3
4.4	Olympic AWTF Greensand System.....	4-11
4.4.1	Operational Monitoring.....	4-11
4.4.2	Water Quality Monitoring.....	4-11
4.4.3	Documentation of System or Equipment Failures or Outages.....	4-13
4.5	UV-AOP System.....	4-13
4.5.1	Operational Monitoring.....	4-14
4.5.2	Water Quality Monitoring.....	4-14
4.5.3	Documentation of System or Equipment Failures or Outages.....	4-17
4.6	GAC System.....	4-17
4.6.1	Operational Monitoring.....	4-17
4.6.2	Water Quality Monitoring.....	4-17
4.6.3	Documentation of System or Equipment Failures or Outages.....	4-22
4.7	RO System.....	4-22
4.7.1	Operational Monitoring.....	4-22
4.7.2	Water Quality Monitoring.....	4-25
4.7.3	Documentation of System or Equipment Failures or Outages.....	4-32
4.8	Decarbonation System.....	4-33
4.8.1	Operational Monitoring.....	4-33
4.8.2	Water Quality Monitoring.....	4-33
4.8.3	Documentation of System or Equipment Failures or Outages.....	4-36
4.9	Arcadia WTP Final Effluent.....	4-36
4.9.1	Water Quality Monitoring.....	4-36
4.9.2	Documentation of System or Equipment Failures or Outages.....	4-48
4.10	Deviations from Acceptance Test Plan.....	4-48
4.11	Operational and Treatment Performance Compliance.....	4-49
	Appendix A: Olympic AWTF Performance Testing Hardsheet.....	A
	Appendix B: FRRO Performance Test Hardsheet.....	B
	Appendix C: 7-Day Acceptance Test Hardsheet.....	C
	Appendix D: Weck Laboratory Reports.....	D
	Appendix E: SCADA System Data.....	E
	Appendix F: Instrument Calibrations.....	F
	Appendix G: Exhibit 6 Performance Parameters.....	G
	Appendix H: Trojan UV-AOP Performance Test Report.....	H

List of Figures

Figure 1-1. Expanded Arcadia WTP monitoring and sampling locations	1-5
Figure 2-1. Steady-state times for UV-AOP Performance Test	2-11
Figure 2-2. Comparison between online UVT and grab sample UVT at influent sample port	2-15
Figure 2-3. Comparison between measured and PLC H ₂ O ₂ -calculated concentrations	2-16
Figure 2-4. UV-AOP performance Test 1,4-dioxane treatment results	2-22
Figure 2-5. UV-AOP performance test PCE treatment results	2-25
Figure 2-6. UV-AOP performance test TCE treatment results.....	2-28
Figure 3-1. FRRRO Performance test flows and percent recovery – Train 2.....	3-4
Figure 3-2. FRRRO performance test flows and percent recovery – Train 3.....	3-5
Figure 3-3. FRRRO performance test flows and percent recovery – Train 4.....	3-6
Figure 3-4. RO feed water quality monitoring – ORP, conductivity, chloramine residual.....	3-7
Figure 3-5. RO feed water quality monitoring – temperature and pH.....	3-8
Figure 3-6. RO feed water quality monitoring – turbidity	3-8

List of Tables

Table ES-1. Olympic AWTF Operational and Treatment Performance Compliance	2
Table ES-2. FRRRO Operational and Treatment Performance Compliance	2
Table ES-3. 7-Day Acceptance Test Performance Criteria	3
Table 1-1. Acceptance Testing Overview.....	1-2
Table 1-2. Monitoring and Sample Compliance Points	1-3
Table 1-3. Deviations from the AWTF Performance Test Plan	1-7
Table 1-4. Deviations from the FRRRO Performance Test Plan	1-8
Table 1-5. Deviations from the 7-day Acceptance Test Plan	1-8
Table 2-1. Olympic AWTF Operational and Treatment Performance Criteria.....	2-1
Table 2-2. Olympic AWTF Performance Test Plan Conditions	2-2
Table 2-3. Olympic AWTF Operational Conditions.....	2-4
Table 2-4. Olympic AWTF Performance Test Source Water Quality Monitoring	2-5
Table 2-5. Greensand Performance Test Results	2-9
Table 2-6. UV-AOP Performance Test Conditions.....	2-14
Table 2-7. UV-AOP Performance Measured UVT and H ₂ O ₂ Results	2-17
Table 2-8. Trojan Feed Water Quality Results.....	2-20

Table 2-9. UV-AOP Performance Test 1,4-Dioxane Treatment Performance	2-23
Table 2-10. UV-AOP Performance Test PCE Treatment Performance	2-26
Table 2-11. UV-AOP Performance Test TCE Treatment Performance.....	2-29
Table 2-12. GAC Performance Test Conditions.....	2-31
Table 2-13. Olympic AWTF GAC COPCs	2-32
Table 2-14. Deviations from the AWTF Performance Test Plan	2-33
Table 2-15. Olympic AWTF Operational and Treatment Performance Compliance	2-34
Table 3-1. FRRO Performance Test Performance Criteria.....	3-1
Table 3-2. Test Plan FRRO Performance Test Matrix.....	3-1
Table 3-3. Test Plan FRRO Performance Test Matrix.....	3-2
Table 3-4. FRRO Performance Test Operational Monitoring.....	3-3
Table 3-5. FRRO Performance Test Water Quality Monitoring.....	3-9
Table 3-6. FRRO Operational and Treatment Performance Compliance	3-12
Table 4-1. 7-Day Acceptance Test Performance Criteria.....	4-2
Table 4-2. 7-day Acceptance Test Conditions	4-5
Table 4-3. 7-Day Acceptance Test Source Water Monitoring – Olympic Wells	4-6
Table 4-4. 7-day Acceptance Test Source Water Monitoring – Charnock WTP	4-8
Table 4-5. Operational Monitoring for Olympic AWTF Greensand Filters	4-11
Table 4-6. 7-day Acceptance Test Greensand Filter COPCs.....	4-12
Table 4-7. Water Quality Monitoring for Olympic AWTF Greensand Filters	4-13
Table 4-8. Failures or Outages for the Olympic AWTF Greensand Filter System	4-13
Table 4-9. Operational Monitoring for UV-AOP System.....	4-15
Table 4-10. 7-day Acceptance Test UV-AOP System Effluent COPCs	4-16
Table 4-11. Field Sample Analysis Results for UV-AOP System	4-17
Table 4-12. Failures or Outages for the UV-AOP System	4-17
Table 4-13. Operational Monitoring for GAC System.....	4-19
Table 4-14. 7-day Acceptance Test GAC System COPCs	4-20
Table 4-15. Results of H ₂ O ₂ Water Quality Monitoring for GAC System	4-21
Table 4-16. GAC Flushing Results.....	4-22
Table 4-17. Failures or Outages for the GAC System	4-22
Table 4-18. Operational Monitoring for RO Feed System.....	4-26
Table 4-19. Operational Monitoring for RO System – Train 2.....	4-27
Table 4-20. Operational Monitoring for RO System – Train 3.....	4-28
Table 4-21. Operational Monitoring for RO System - Train 4	4-29

Table 4-22. 7-Day Acceptance Test RO System COPCs.....	4-30
Table 4-23. Online Feed Water Quality Data and Field Analysis Results for RO System	4-32
Table 4-24. Failures or Outages for the RO System	4-32
Table 4-25. Operational Monitoring for Decarbonation System	4-33
Table 4-26. 7-Day Acceptance Test Decarbonator COPCs.....	4-34
Table 4-27. Failures or Outages for the Decarbonation System.....	4-36
Table 4-28. 7-day Acceptance Test Arcadia WTP Finished Water - Background Water Quality and COPCs.....	4-38
Table 4-29. 7-day Acceptance Test Arcadia WTP Finished Water - Organic Chemicals	4-39
Table 4-30. Day Acceptance Test Arcadia WTP Finished Water - Radionuclide Chemicals.....	4-41
Table 4-31. 7-Day Acceptance Test Arcadia WTP Finished Water – Inorganic Chemicals.....	4-42
Table 4-32. 7-Day Acceptance Test Arcadia WTP Finished Water – Disinfection Byproducts.....	4-43
Table 4-33. 7-Day Acceptance Test Arcadia WTP Finished Water – Lead and Copper.....	4-43
Table 4-34. 7-Day Acceptance Test Arcadia WTP Finished Water – Secondary Drinking Water Standards.....	4-43
Table 4-35. 7-Day Acceptance Test Arcadia WTP Finished Water – Notification Levels.....	4-44
Table 4-36. Additional Field and Online Monitor Water Quality for Finished Water	4-45
Table 4-37. Arcadia WTP COPCs Treated Water Quality Performance Parameters (Exhibit 6, Table 3).....	4-45
Table 4-38. Arcadia WTP Inorganic Treated Water Quality Performance Parameters (Exhibit 6, Table 4)	4-46
Table 4-39. Arcadia WTP Major Effluent Water Quality Performance Parameters (Exhibit 6, Table 5).....	4-47
Table 4-40. Failures or Outages for the Finished Water	4-48
Table 4-41. 7-day Acceptance Test Performance Criteria.....	4-49

List of Abbreviations

µg/L	micrograms per liter	NTU	nephelometric turbidity unit(s)
µS/cm	microsiemens per centimeter	ORP	oxidation reduction potential
AI	aggressive index	PCE	tetrachloroethene
AWTF	advanced water treatment facility	PFOA	Perfluorooctanoic acid
AWWA	American Water Works Association	PLC	programmable logic controller
BDL	below detection limit	PO ₄	phosphate
BDLR	below detection limit for the purpose of reporting	RO	reverse osmosis
CaCO ₃	calcium carbonate	RSD	relative standard deviation
CCPP	calcium carbonate precipitation potential	SDI	silt density index
City	City of Santa Monica	ST	Scavenging term
Cl ₂	chlorine	TCE	trichloroethylene
COPC	constituent of potential concern	TOC	total organic compound
DDW	Division of Drinking Water	TON	threshold odor number
EBCT	empty bed contact time	UV	ultraviolet
EPA	Environmental Protection Agency	UV-AOP	ultraviolet advanced oxidation process
Fe	iron	UVT	ultraviolet transmittance
FRRO	flow reversal reverse osmosis	VFD	variable-frequency drive
ft ²	square foot/feet	w.c.	water column
GAC	granular activated carbon	WTP	Water Treatment Plant
gfd	gallons per sqft per day (membranes)		
gpm	gallon(s) per minute		
H ₂ O ₂	hydrogen peroxide		
HMI	human-machine interface		
LR	log removal		
LSI	Langlier saturation index		
MCL	maximum contaminant level		
MCLeq	maximum contaminant level equivalent		
MDL	method detection limit		
meq/L	milliequivalents per liter		
mg/L	milligrams per liter		
mL	milliliter(s)		
MPN	most probably number		
Mn	manganese		
MRL	method reporting limit		
N	nitrogen		
NA	not applicable		
ND	non-detect		
ng/L	nanograms per liter		

Executive Summary

This document reports the results of acceptance testing conducted by Walsh and Brown and Caldwell on the City of Santa Monica's (City) expanded Arcadia Water Treatment Plant (WTP) and new Olympic Advanced Water Treatment Facility (AWTF) in accordance with the Acceptance Test Plan submitted to the City and the California State Water Resources Control Board, Division of Drinking Water (DDW). The testing was done to verify that the new and existing treatment units met the operational and performance criteria for treating different sources of groundwater, including advanced treatment processes such as ultraviolet advanced oxidation process (UV-AOP), granular activated carbon (GAC), flow-reversal reverse osmosis (FRRO), and decarbonation.

Acceptance testing was completed in two parts:

1. Performance testing of new and modified treatment units (covered in Sections 2 and 3).
2. Followed by the 7-day acceptance test (covered in Section 4).

The objective of the performance test was to demonstrate each treatment unit (i.e., greensand filters, UV-AOP, GAC, and FRRO) achieved performance requirements across anticipated range of treatment conditions and performance guarantees specified in Exhibit 6. The objective of the 7-day acceptance test was to demonstrate the AWTF and the FRRO system could operate in concert and produce finished water that complies with drinking water standards.

UV/AOP Performance Test Performance

Overall, the UV-AOP system achieved the 1,4-dioxane compliance log removal setpoint and programable logic controller (PLC)-predicted log removal for all tests under design conditions with a 2.4-log removal target, scavenging term (ST) of 130,000 s⁻¹, ultraviolet transmittance (UVT) greater than 96 percent, and flow ranging from 1,000 to 2,000 gpm for all flow blends. A summary of the performance criteria and compliance is provided in Table ES-1. Based on the testing results, the Design-Build team recommends the City use the Trojan UV "Dynamically Adjusted Control Algorithm" approach with a variable lamp power and hydrogen peroxide dose. Compliance setpoints of 2.4-log removal for 1,4-dioxane, 2.2-log removal for trichloroethylene (TCE), and 2.3-log removal for tetrachloroethene (PCE) should be used with design scavenging term of 130,000 s⁻¹ when operating at ambient influent pH. It is recommended that the system operates with an operational log removal setpoint of 10% greater than the compliance log removal setpoint (i.e., 1.1 safety factor).

Table ES-1. Olympic AWTF Operational and Treatment Performance Compliance

Test	Parameter	Criteria	Compliance
Greensand performance test	Iron	≤ 0.3 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)	Achieved ^a
	Manganese	≤ 0.05 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)	Achieved ^a
UV-AOP performance test	1,4-dioxane	≥ 2.4-log removal	Achieved for all design conditions ^b
	TCE	≥ 2.2-log removal	Achieved for all conditions
	PCE	≥ 2.3-log removal	Achieved for all design conditions ^c
	Total flow	2,000 gpm	Achieved
	UVT	≥ 96%	Achieved
	UV system power	329 kW	Final Trojan report pending
	H ₂ O ₂ Dose	Maximum H ₂ O ₂ dose of 40 mg/L	Achieved
GAC performance test	H ₂ O ₂	Quench residual H ₂ O ₂ to non-detect	Achieved
	COPCs	Document treatment performance	Documented
	Loading rate	≤ 5.9 gpm/ft ²	Achieved
	EBCT	≥ 5 minutes	Achieved
	Headloss	≤ 10-inch w.c./ft bed depth	Achieved

- a. The City's Fe and Mn combined target concentration of ≤ 0.06 mg/L was achieved for all conditions except C2. Lower concentrations are expected when well sodium hypochlorite chemical feed systems are operational.
- b. Test 14 did not achieve the 1,4-dioxane log removal compliance setpoint of 1.2-log. This test condition was set below the design criteria log removal setpoint of 2.4-log.
- c. Tests 14 and 15 did not achieve the PCE log removal compliance setpoint of 1.15-log. This test condition was set below the design criteria log removal setpoint of 2.3-log. Test 10 was identified as an anomalous result.

FRRO Performance Test Performance

The FRRO system met performance goals. RO Trains 2, 3, and 4 were operated at the maximum design flow of 1,900 gpm at the specified antiscalant dose during the FRRO performance test. A summary of the performance compliance is provided in Table ES-2.

Table ES-2. FRRO Operational and Treatment Performance Compliance

Parameter	Criteria	Compliance
System Recovery	90%	Train 2 and Train 3 achieved; Train 4 operated to 88% per agreed-upon goals
Feed Flow Range, per Train	1,650 to 1,900 gpm	Achieved
Feed Water pH	≥ 6.6	Achieved
Antiscalant Dose	2.4 to 4.5 mg/L (Avista Vitec-4000) or 0.8 to 1.2 mg/L (AWC A-119)	Achieved
COPCs and Background Water Quality	Document treatment performance	Documented

7-Day Test Operational and Treatment Performance Compliance

The 7-day acceptance test was conducted from February 12, 2024 through February 18, 2024 and confirmed that UV-AOP, GAC, and FRRO systems satisfy treatment and operational performance criteria during full operation of the expanded Arcadia WTP and Olympic AWTF. A summary of the 7-day acceptance test operational and treatment performance compliance is provided in Table ES-3.

Table ES-3. 7-Day Acceptance Test Performance Criteria			
System	Parameter	Criteria	Compliance
Greensand	Iron ^a	≤ 0.3 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)	Achieved ^b
	Manganese ^a	≤ 0.05 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)	Achieved ^b
UV-AOP	1,4-dioxane	≥ 2.4 log removal ^b	Achieved
	TCE	≥ 2.2 log removal ^b	Achieved
	PCE	≥ 2.3 log removal ^b	Achieved
	Total flow	2,000 gpm	Achieved
	UVT	≥ 96%	Achieved
	UV System Power	329 kW	Final Trojan report pending ^d
	H ₂ O ₂ Dose	Maximum H ₂ O ₂ dose of 40 mg/L	Achieved
GAC	H ₂ O ₂	Quench residual H ₂ O ₂ to non-detect	Achieved
	COPCs	Document treatment performance	Achieved
	Loading Rate	≤ 5.9 gpm/ft ²	Achieved
	EBCT	≥ 5 minutes	Achieved
	Headloss	≤ 10-inch w.c./ft bed depth	Achieved
FRRO	System Recovery	90%	Achieved
	Feed Flow Range, per Train	1,650 to 1,900 gpm	Achieved
	Feed Water pH	≥ 6.6	Achieved
	Antiscalant Dose	2.4 – 4.5 mg/L (Avista Vitec-4000) or 0.8 to 1.2 mg/L (AWC A-119)	Achieved
	COPCs and Background Water Quality	Document treatment performance	Achieved
Decarbonator	Carbon Dioxide	≤ 12 mg/L in effluent	Achieved
	Flow Rate	2,800 gpm (max)	Achieved
	Liquid Loading Rate	29.6 gpm/ft ² (max)	Achieved

Table ES-3. 7-Day Acceptance Test Performance Criteria

System	Parameter	Criteria	Compliance
Arcadia WTP Final Effluent (Arcadia Reservoir Effluent)	Organic Constituents	Exhibit 6, Table 3	Achieved ^c
	Inorganic Constituents	Exhibit 6, Table 4	Achieved
	DDW Water Quality Standards	MCL _{eq} < 1 ^b	Achieved
	pH	8.0 to 8.5	Achieved for 4 of the 7 days. Additional RO bypass evaluation will be conducted to achieve City finished water targets
	Total Dissolved Solids	350 to 500 mg/L	TDS was below the target range. Additional RO bypass evaluation will be conducted to achieve City finished water targets
	Turbidity	0.1 to 0.2 NTU	Achieved
	Alkalinity	75 - 150 mg/L as CaCO ₃	Day 5 and Day 6 were below target alkalinity. Additional RO bypass evaluation will be conducted to achieve City finished water targets
	Fluoride	0.5 to 1.0 mg/L	Achieved
	LSI	-1 to 1	Achieved
CCPP	None	N/A. For informational purposes only.	

- a. Iron and manganese criteria concentrations are based on feed water quality requirements specified in RO Specifications 46 63 23 Section 2.01. The greensand filter was operated to achieve the City target greensand effluent concentrations of iron + manganese ≤ 0.06 mg/L.
- b. Log removal criteria based on potential, future treatment plant influent concentrations.
- c. All organic treated water quality requirements were achieved during the 7-day acceptance test, except for TCE on Day 1. High TCE concentrations were contributed from Charnock WTP source water and not Olympic AWTF with all samples below method reporting limit in the GAC effluent samples.
- d. Design log removal goals were achieved at design operating conditions. Final Trojan power measurements pending.

MCL_{eq} = maximum contaminant level equivalent calculated by the sum of each contaminant in the fully treated water divided by its respective maximum contaminant level (MCL) or notification level (where applicable), which must be less than 1.

Treatment performance compliance criteria were achieved for the greensand, UV-AOP, GAC, FRRO, and decarbonator treatment systems. All Arcadia final effluent samples achieved primary maximum contaminant levels (MCLs), secondary MCLs, action levels, notification levels, and a COPC (maximum contaminant level equivalent (MCL_{eq}) of less than 1.

Arcadia specific finished water performance criteria were achieved for inorganic constituents (Exhibit 6, Table 4) and organic constituents (Exhibit 6, Table 3), except for a detection of TCE at 0.56 µg/L on Day 1. TCE concentrations observed in the RO feed water were contributed by Charnock WTP source water with all Olympic GAC effluent samples being non-detect. Some effluent water quality performance parameters (Exhibit 6, Table 5) were not achieved for all sample days: pH values exceed the target range for three of the seven days; TDS was below the target range on all days; and, alkalinity was below the target range on two of the seven days at the bypass percentage used during the 7-Day test. The Design-Builder will develop an additional, more detailed water quality profile of a range of bypass blend scenarios during the 30-day test following permit amendment approval by the DDW and refine the blend control strategy and demonstrate the system's ability to consistently meet the range of water quality goals.

Section 1

Acceptance Test Overview

1.1 Overview

Brown and Caldwell conducted acceptance testing on the City of Santa Monica (City) expanded Arcadia Water Treatment Plant (WTP) and Olympic Advanced Water Treatment Facility (AWTF) in accordance with the Acceptance Test Plan submitted to the City and the California State Water Resources Control Board, Division of Drinking Water (DDW). Acceptance testing was conducted to demonstrate compliance with operational and treatment performance criteria of the new and modified treatment units, including re-piping of the greensand filters to treat the existing flow (fed by the Charnock and Arcadia wells) separate from the new Olympic well water source, an ultraviolet advanced oxidation process (UV-AOP), granular activated carbon (GAC), flow-reversal reverse osmosis (FRRO), and the addition of a decarbonation tower (decarbonator).

Acceptance testing was completed in two parts:

1. Performance testing of new and modified treatment units (covered in Sections 2 and 3).
2. Followed by the 7-day acceptance test (covered in Section 4).

The objective of the performance test was to demonstrate each treatment unit (i.e., greensand filters, UV-AOP, GAC, and FRRO) achieved performance requirements across anticipated range of treatment conditions and specified performance guarantees. The objective of the 7-day acceptance test was to demonstrate the AWTF and the FRRO system could operate in concert and produce finished water that complies with drinking water standards. An outline of the performance test and 7-day acceptance test compliance criteria is summarized in Table 1-1.

1.2 Compliance Points

Monitoring locations and sample locations for each of the processes is provided in Table 1-2. An illustration of the Arcadia WTP process flow diagram is provided in Figure 1-1.

Table 1-1. Acceptance Testing Overview			
Test	Purpose	Task	Compliance
Olympic AWTF Performance Test	Demonstrate UV-AOP and GAC treatment units achieve operational and performance criteria	Greensand Performance Test	<ul style="list-style-type: none"> Iron (Fe) ≤ 0.3 milligrams per liter (mg/L) in greensand effluent Manganese (Mn) ≤ 0.05 mg/L in effluent Target combined Fe & Mn ≤ 0.06 mg/L for RO feed requirements^a
		UV-AOP Performance Test ^b	<ul style="list-style-type: none"> 1,4-dioxane ≥ 2.4-log removal Trichloroethylene (TCE) ≥ 2.2-log removal Perchloroethylene (PCE) ≥ 2.3-log removal Total flow 2,000 gallons per minute (gpm) UVT ≥ 96% Ultraviolet (UV) system maximum power 329 kW Hydrogen peroxide (H2O2) maximum dose 40 mg/L
		GAC Performance Test	<ul style="list-style-type: none"> Quench residual H2O2 to non-detect Document contaminants of potential concern (COPC) treatment performance Loading rate ≤ 5.9 gpm/per square foot (gpm/ft²) Empty bed contact time (EBCT) ≥ 5 minutes Headloss ≤ 10-inch water column per foot (w.c./ft) bed depth
FRRO Performance Test	Demonstrate modified RO system can operate in FRRO configuration and achieve operational and performance criteria.	FRRO Performance Test	<ul style="list-style-type: none"> System recovery ≥ 90% Feed flow range (per train) 1,650 – 1,900 gpm Antiscalant dose 2.4 – 4.5 mg/L (Avista Vitec-4000) or 0.8 – 1.2 mg/L (AWC A-119) Feed water pH goal ≥ 6.6 Document COPC treatment performance
7-Day Acceptance Test	Demonstrate 7-day continuous operation of all new and modified treatment units and comply with operational and treatment performance criteria.	7-Day Acceptance Test	<ul style="list-style-type: none"> Greensand performance test criteria UV-AOP performance test criteria GAC performance test criteria FRRO performance test criteria Decarbonator carbon dioxide (CO₂) ≤ 12 mg/L in effluent Decarbonator maximum flow rate 2,800 gpm Decarbonator maximum loading rate 29.6 gpm/ft² Arcadia WTP final effluent water quality Organic constituents (Exhibit 6, Table 3) Inorganic constituents (Exhibit 6, Table 4) DDW Water Quality Standards, Maximum Contaminant Level equivalent (MCLeq) ≤ 1 Arcadia major effluent water quality (Exhibit 6, Table 5)

Note. Criteria should be achieved within all system design criteria (i.e., flow rate, ultraviolet transmittance (UVT), other anticipated water quality) per Exhibit 6 and Specifications 46 63 23.

a. Iron and manganese criterion is based on feed water quality requirements specified in reverse osmosis (RO) Specifications 46 63 23 Section 2.01. The greensand filter was operated to achieve the City’s target greensand effluent concentrations of iron + manganese of ≤ 0.06 mg/L.

b. UV-AOP performance criteria reflect requirements specified in Exhibit 6, Section 6.1 and Specification 44 66 13 in Table 2. Design criteria in Specification 44 66 13.

MCLeq = maximum contaminant limit equivalent calculated by the sum of each contaminant in the fully treated water divided by its respective maximum contaminant level or notification level (where applicable), which must be less than or equal to 1.



Table 1-2. Monitoring and Sample Compliance Points

System	Sample Locations	Sample Label	Purpose
Olympic Greensand Filter	Olympic Well Blend	S4	Monitor greensand performance to meet UV-AOP and RO pretreatment requirements
	Greensand Effluent	S8	
UV-AOP	UV-AOP Feed	S9	Confirm UV-AOP operational and treatment performance
	UV-AOP Effluent ^a	S10	
GAC	GAC Lead Vessel Effluent ^b	S23	Confirm GAC operational and treatment performance
	GAC Lag Vessel Effluent	S11	
Charnock/Arcadia Wells Greensand Filter	RO Feed from Charnock/Arcadia Well Stream	S7	Monitor RO feed water quality from Charnock WTP/Arcadia well stream
RO Feed Tank	Combined RO Feed (post cartridge filter)	S14	Confirm FRRO operational and treatment performance
RO Skids	RO Skid Permeate	S15	
	RO Combined Permeate	S24	
Decarbonator	Decarbonator Feed (post RO bypass)	S18	Confirm decarbonator operational and treatment performance
	Decarbonator Effluent	S19	
Arcadia WTP Final Effluent	Arcadia Reservoir Effluent	S22	Confirm Arcadia WTP finished water quality achieves treatment requirements

a. UV-AOP effluent sample were collected at the UV reactor in operation.

b. GAC lead vessel was sampled for H₂O₂ along the carbon bed for at least one of the GAC performance testing conditions.

This page intentionally left blank.



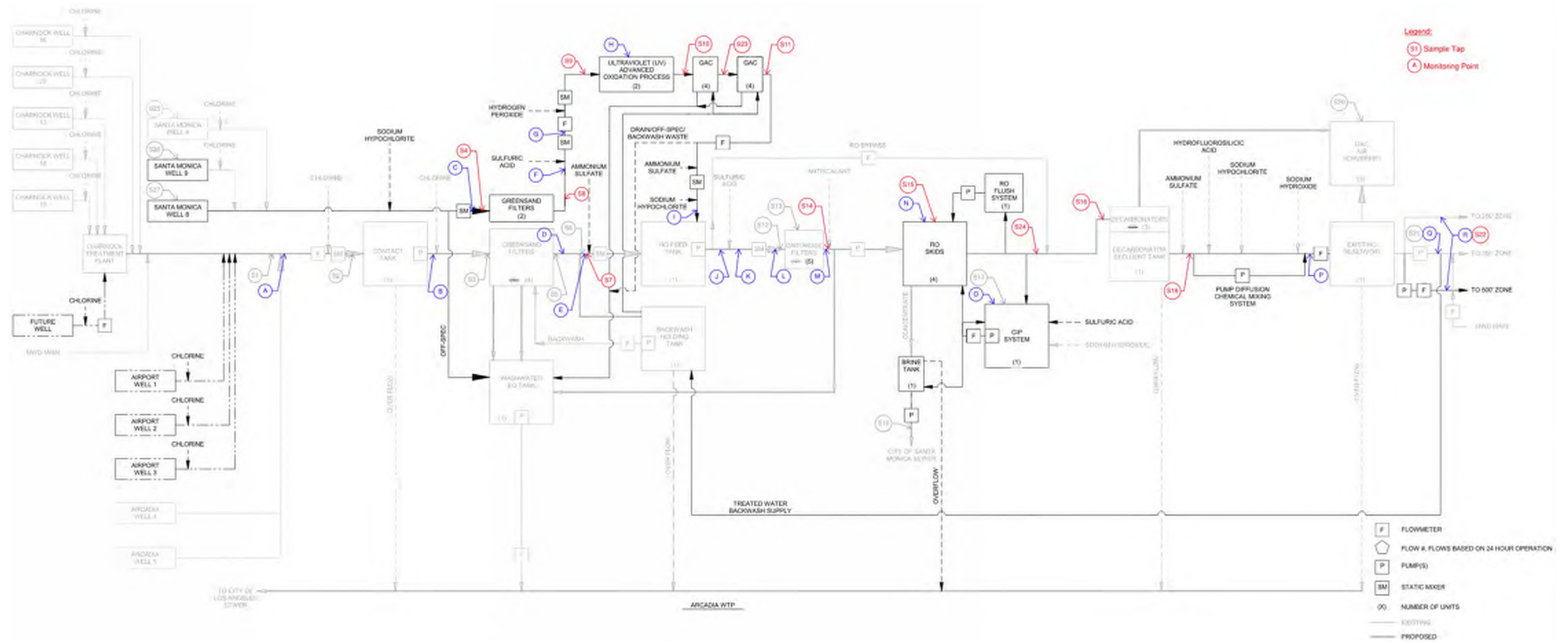


Figure 1-1. Expanded Arcadia WTP monitoring and sampling locations

This page intentionally left blank.



1.3 Confirmation of Execution in Accordance with Acceptance Test Plan

Deviations of the Olympic AWTF performance test, FRRO performance test, and 7-day acceptance test in accordance with the Acceptance Test Plan is detailed below. All other aspects were executed in accordance with the Acceptance Test Plan including:

- Confirmation of results with respect to each of the Acceptance Test Standards.
- All data measured and recorded during testing (Appendix A to Appendix E).
- Confirmation of results with respect to 1,4-dioxane, TCE and PCE by the UV-AOP (Section 2).
- Confirmation of RO recovery performance (Section 3 and 4) and Arcadia WTP final potable water quality (Section 4).
- Record of equipment outages, failures, and preventative maintenance (Section 2, Section 3, Section 4).
- Summary of test results and conclusive evidence of compliance with all test requirements (Section 2, Section 3, Section 4)
- All calculations used in determining test results.
- Testing was operated properly with normal complement of employees to execute acceptance testing.
- Testing was compliant with all applicable governmental approvals at all times.
- Testing operations was consistent with project criteria specified in Exhibit 6, Section 5.1.
- Testing was operated with automated and computerized systems in full and continuous operation, as specified in detail in following sections.

1.3.1 Olympic AWTF Performance Test

Table 1-3 provides a summary of deviations from the Olympic AWTF performance test. Processes are discussed in more detail in Section 2.

Table 1-3. Deviations from the AWTF Performance Test Plan		
Item	Condition	Description
SM-4	All	Olympic well SM-4 was not in operation during the performance test period. Well blends according to the AWTF Performance Test Plan were adjusted based on available operational Olympic wells (i.e. SM-8 and SM-9). Confirmation of this deviation with DDW was received during the DDW meeting on August 9, 2023.
Hydrogen peroxide system malfunction	Test 10	The hydrogen peroxide system malfunctioned during test 10 causing manual shutdown of the UV-AOP system. The hydrogen peroxide system was fixed, and Test 10 was retested in manual mode simulating specified test conditions.
GAC Train 1 and Train 2	All	GAC train 1 was in operation and was collected for COPCs for all test conditions. Flow was also passed through train 2 for test conditions with flow greater than 1,000 gpm. GAC trains are identical; thus, results from train 1 are representative of all other GAC trains.

1.3.2 FRRO Performance Test

Table 1-4 provides a summary of deviations from the FRRO performance test. Processes are discussed in more detail in Section 3.

Table 1-4. Deviations from the FRRO Performance Test Plan		
Item	Condition	Description
RO Train 1	Test 1	RO Train 1 retrofit was still under construction and consequently was not available during FRRO performance testing.
RO Train 4	Test 4	RO Train 4 was operated at 88% recovery due to an issue with scaling observed in the brine line.
Arcadia Wells	All	Arcadia wells were not in operation during FRRO performance testing. All conditions were conducted with a blend of Charnock WTP and Olympic AWTF water.

1.3.3 7-day Acceptance Test

Table 1-5 provides a summary of deviations from the 7-day acceptance test. Processes are discussed in more detail in Section 4.

Table 1-5. Deviations from the 7-day Acceptance Test Plan		
Item	Duration	Description
SM-9	Days 1-7	Offline for duration of 7-day acceptance test due to VFD issues. Capacity from the Olympic AWTF was limited to 1,000 gpm from SM-8 only.
Greensand Filter 5B	Days 1-7	Unable to be placed online during the 7-day acceptance test due to operational issues with existing filtrate valves.
Greensand Filter 6B	Days 1-7	Unable to be placed online during the 7-day acceptance test due to operational issues with existing filtrate valves.
Greensand effluent free chlorine analyzer	Days 1-7	Not connected to Historian. No SCADA data available for duration of 7-day acceptance test.
Greensand effluent turbidimeter	Days 1-7	Existing turbidimeter were not functional for the duration of 7-day test. Combined effluent field grab samples were collected and analyzed for turbidity. The primary treatment objects of the greensand filters are to provide iron and manganese removal for downstream processes (i.e., UV-AOP and FRRO). Turbidity is not a treatment objective for the greensand system and does not impact successful achievement of system performance criteria (i.e., greensand is not implemented to achieve disinfection credits through turbidity removal).
UVT field meters	Day 3 & 4	Low UVT shutdown. Bubbles in the UVT field meter sample lines are suspected to be the cause of the shutdowns, and Trojan suggested installing a de-bubbler in the sample line. The system was able to be immediately restarted following the 20-minute off-spec and warmup periods. No further issues related to low UVT were encountered after installation of the de-bubbler through the remainder of the 7-day test, and there have since been no issues with bubbles causing low UVT shutdowns through the time of writing.
GAC Train 4	Day 5	Offline on 2/16/2024 due to an influent valve requiring repair.
GAC Train 2	Day 5	Shutdown on 2/16/2024 due to high feed pressure.
GAC Trains 1, 3, and 4	Days 1-7	It was discovered on 2/18/2024 that the lead and lag vessel identification were unintentionally switched for Trains 1, 3, and 4, and configuration was kept as is for the entire duration of the 7-day acceptance test. Train 2 was operated as intended with the A vessel as the lead and the B vessel as the lag through the entire 7-day acceptance test. Results in the tables have been matched appropriately.
GAC differential pressure transmitters	Days 1-7	Differential pressure readings were inaccurate throughout the 7-day acceptance test due to calibration issues. Vendor calibrated transmitters following the acceptance test period.

Table 1-5. Deviations from the 7-day Acceptance Test Plan

Item	Duration	Description
All online RO trains	Day 3	RO system was automatically shut down six times due to programmed shutdown conditions, including high pH, for a total of 2.5 hours of downtime. The RO system was manually shut down for an additional hour on the same day to troubleshoot and repair issues relating to pH controls. It was discovered that the sulfuric acid dilution panel static mixer had mechanical issues, impeding sulfuric acid flow to the RO feed injection. Short-term repairs were completed, and dilution flows were also adjusted to help stabilize pH controls.
All online RO trains	Day 4	Following completion of the Day 4 test condition sampling on 2/15/24, the RO system was manually shut down for an additional 2 hours to allow the Contractor to complete permanent repairs on the sulfuric acid dilution panel static mixer. Following repairs, RO feed pH was stable throughout the remaining duration of the acceptance test period.
High-Pressure RO Feed Pump 4	Day 7	The variable-frequency drive (VFD) on the existing High-Pressure RO Feed Pump 4 faulted, and RO Train 4 was unable to be turned on. Repairs were completed the next day. This did not affect the Day 7 test conditions since the test condition only required one RO train to be online. RO Train 2 was subsequently placed online at the same flow and recovery rate for sampling.
RO Feed Tank Monochloramine and Ammonia Analyzer	Days 1-7	Not functional for the acceptance test due to insufficient reagent levels. Reagents were purchased and replaced following the acceptance test period. Total chlorine analyzers were used to monitor chloramine residuals.
Decarbonator Train 3	Days 1-7	Out of service for the duration of the 7-day acceptance test pending Air Quality Management District permit to place the train into service. Trains 1 and 2 were sufficient to produce finished water for all test conditions.
Arcadia Wells	Days 1-7	Not online for the duration of the acceptance test.
Finished water chloramine and ammonia residual analyzer	Days 1-7	Not functional for the acceptance test due to insufficient reagent levels. Reagents were purchased and replaced following the acceptance test period. Total chlorine analyzers and grab samples were used to monitor chloramine residuals in the final effluent.

This page intentionally left blank.



Section 2

Olympic AWWTF Performance Test Results

2.1 Olympic AWWTF Performance Test Overview

The Olympic AWWTF Performance Test was conducted on September 22, 2023, and October 2, 2023 through October 5, 2023 to confirm the Olympic greensand filters, UV-AOP, and GAC systems satisfy operational and treatment performance criteria. Performance testing included two control conditions 20 test conditions evaluating various flow rates, Olympic well blends, and operational setpoints. Operational and water quality parameters were monitored at each unit process (greensand filters, UV-AOP, GAC). A summary of the operational and treatment performance criteria is provided in Table 2-1. The planned Olympic AWWTF Performance Test conditions presented in the Arcadia WTP Acceptance Test Plan is provided in Table 2-2.

Table 2-1. Olympic AWWTF Operational and Treatment Performance Criteria

Test	Parameter	Criteria
Greensand performance test	Iron ^a	≤ 0.3 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)
	Manganese ^a	≤ 0.05 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)
UV-AOP performance test ^b	1,4-dioxane	≥ 2.4-log removal
	TCE	≥ 2.2-log removal
	PCE	≥ 2.3-log removal
	Total flow	2,000 gpm
	UVT	≥ 96%
	UV system power	329 kW
	H ₂ O ₂ dose	Maximum H ₂ O ₂ dose of 40 mg/L
GAC performance test	H ₂ O ₂	Quench residual H ₂ O ₂ to non-detect
	COPCs	Document treatment performance
	Loading rate	≤ 5.9 gpm/ft ²
	EBCT	≥ 5 minutes
	Headloss	≤ 10-inch w.c./ft bed depth

Note. Criteria should be achieved within all system design criteria (i.e., flow rate, UVT, other anticipated water quality) per Exhibit 6 and Specifications 46 63 23.

- a. Iron and manganese criterion is based on feed water quality requirements specified in RO Specifications 46 63 23 Section 2.01. The greensand filter was operated to achieve the City's target greensand effluent concentrations of iron + manganese of ≤ 0.06 mg/L.
- b. UV-AOP performance criteria reflect requirements specified in Exhibit 6, Section 6.1 and Specification 44 66 13 in Table 2. Design criteria in Specification 44 66 13.

Table 2-2. Olympic AWTF Performance Test Plan Conditions

Test ID	Olympic Well Blend				Greensand Units in Operation	UV-AOP System										GAC Units in Operation
	SM-4	SM-8	SM-9	Total Flow Rate		Unit in Operation	Mode	Lamp Power	H ₂ O ₂ Setpoint	Scavenging Term (s ⁻¹) ^b	UVT	pH	1,4-D Log R Setpoint	PCE Log R Setpoint	TCE Log R Setpoint	
C1 ^c	32.5%	27.5%	40%	2,000	5, 6	1	Manual	0	40	130,000	amb.	amb.	-	-	-	3
C2	32.5%	27.5%	40%	2,000	5, 6	1	Manual	100	0	130,000	amb.	amb.	-	-	-	3
1	32.5%	27.5%	40%	2,000	5, 6	1	Manual	84	40	130,000	96	amb.	-	-	-	3
2	32.5%	27.5%	40%	2,000	5, 6	1	Manual	84	40	130,000	96	amb.	-	-	-	3
3	32.5%	27.5%	40%	2,000	5, 6	1	Manual	84	40	Measured	96	amb.	-	-	-	3
4	32.5%	27.5%	40%	2,000	5, 6	1	Auto	97 ^a	30.7 ^a	130,000	96	amb.	2.4	2.3	2.2	3
5	32.5%	27.5%	40%	2,000	5, 6	1	Auto	100 ^a	40 ^a	130,000	93	amb.	2.4	2.3	2.2	3
6	32.5%	27.5%	40%	2,000	5, 6	1	Auto	92 ^a	36.6 ^a	130,000	amb.	amb.	2.4	2.3	2.2	3
7	32.5%	27.5%	40%	2,000	5, 6	1	Auto	85 ^a	20.1 ^a	130,000	amb.	amb.	1.2	1.15	1.1	3
8	32.5%	27.5%	40%	2,000	5, 6	1	Auto	88 ^a	19.8 ^a	Measured	amb.	amb.	1.2	1.15	1.1	3
9 ^c	45%	0%	55%	1,450	5, 6	1	Auto	97 ^a	38.4 ^a	130,000	amb.	amb.	2.4	2.3	2.2	3
10 ^c	0%	35%	65%	1,000	5, 6	1	Auto	80 ^a	38.2 ^a	130,000	amb.	amb.	2.4	2.3	2.2	3
11	0%	35%	65%	1,000	5, 6	1	Auto	96 ^a	34.6 ^a	Measured	amb.	amb.	2.4	2.3	2.2	3
12 ^c	65%	35%	0%	1,000	5, 6	1	Auto	80 ^a	38.2 ^a	130,000	amb.	amb.	2.4	2.3	2.2	3
13	65%	35%	0%	1,000	5, 6	1	Auto	96 ^a	34.6 ^a	Measured	amb.	amb.	2.4	2.3	2.2	3
14 ^c	32.5%	40%	27.5%	2,000	5, 6	1	Auto	96 ^a	36.6 ^a	130,000	amb.	amb.	2.4	2.3	2.2	3
15	32.5%	40%	27.5%	2,000	5, 6	1	Auto	93 ^a	23.9 ^a	Measured	amb.	amb.	2.4	2.3	2.2	3
16	32.5%	27.5%	40%	2,000	5, 6	1	Auto	99 ^a	31.4 ^a	130,000	amb.	amb.	1.8	1.73	1.65	3
17	32.5%	27.5%	40%	2,000	5, 6	1	Auto	99 ^a	29.1 ^a	Measured	amb.	amb.	1.8	1.73	1.65	3
18	32.5%	27.5%	40%	2,000	5, 6	1	Auto	100 ^a	38.5 ^a	130,000	amb.	6.5	2.4	2.3	2.2	3
19	32.5%	27.5%	40%	2,000	5, 6	1	Auto	97 ^a	32.4 ^a	130,000	96	6.5	2.4	2.3	2.2	3
20	32.5%	27.5%	40%	2,000	5, 6	1	Auto	98 ^a	22.1 ^a	Measured	amb.	6.5	2.4	2.3	2.2	3

Log R = log removal

a. Values shown for test conditions under "Auto" Mode are predicted based on Trojan algorithm for influent water quality and log removal setpoints.

b. Scavenging term (ST) will be set at 130,000 s⁻¹ ("design" value) per manufacturer specification or the "measured" value from preliminary well sampling ST results.

c. Collect source water monitoring sample.

amb = ambient



2.2 Operational and Performance Test Conditions

The test conditions executed during the Olympic AWTF performance test are presented in Table 2-3. As discussed with DDW on August 9, 2023, the Olympic well SM-4 is no longer operable and is planned for replacement. The production capacity of SM-4 is less than 100 gpm and upon inspection, it was discovered that a hole was blown in the well casing and that the C-Zone and below was completely blocked. As a result, SM-4 was not in operation during the performance testing period. The Olympic well blends for SM-8 and SM-9 were adjusted to accommodate the loss of flow from SM-4. Further details about the operational test conditions and performance for each Olympic AWTF treatment process is provided in the following sections:

- Source Water Monitoring – Section 2.3
- Greensand – Section 2.4
- UV-AOP – Section 2.5
- GAC – Section 2.6

2.3 Source Water Quality Monitoring

Source water quality samples were collected at the greensand influent sample location (S4) to monitor the incoming water quality from the Olympic well blends. Background water quality samples were collected daily for each Olympic well blend. COPC samples were collected for each unique Olympic well blend (i.e., 50 percent SM-8 and 50 percent SM-9, 100 percent SM8, and 100 percent SM-9). A summary of the source water quality for the Olympic AWTF performance test is provided in Table 2-4. Analytical results for Olympic AWTF performance test are reported to the analytical method detection limit (MDL) to provide more precise quantification of treatment performance for each treatment process. Results presented may be below the analytical method reporting limit (MRL), shown with a “J” qualifier, and below DDW detection limits for the purpose of reporting (DRL), as reported in the 7-day acceptance test (Section 4).

Table 2-3. Olympic AWTF Operational Conditions

Test No.	Olympic Well Blend (gpm)			Total Flow Rate (gpm)	Greensand Units in Operation	UV-AOP System ^a											GAC Units in Operation
	SM-4 ^b	SM-8	SM-9			Unit in Operation	Mode	Lamp Power (%)	Total Lamp Power (kW)	H ₂ O ₂ Setpoint (mg/L)	ST (s ⁻¹)	UVT (%)	pH	1,4-D Log R Setpoint	PCE Log R Setpoint	TCE Log R Setpoint	
C1	-	1,000	1,000	2,000	5, 6	2	Manual	0.0	0.0	39.6	--	97.8	7.1	-	-	-	1,2
C2	-	1,001	1,002	2,003	5, 6	2	Manual	100	277	0.0	--	97.6	7.0	-	-	-	1,2
1	-	999	998	1,997	5, 6	2	Manual	84.0	233	40.0	--	95.6	7.0	-	-	-	1,2
2	-	999	998	1,997	5, 6	2	Manual	84.0	233	40.0	--	95.7	7.0	-	-	-	1,2
3	-	1,000	999	1,999	5, 6	2	Manual	83.0	230	37.0	--	95.8	7.0	-	-	-	1,2
4	-	991	991	1,982	5, 6	2	Auto	77.5	195	30.7	130,000	95.9	7.0	2.40	2.30	2.20	1,2
5	-	992	989	1,981	5, 6	2	Auto	95.0	263	38.3	130,000	93.5	7.1	2.40	2.30	2.20	1,2
6	-	990	998	1,988	5, 6	2	Auto	82.0	145	28.6	130,000	98.5	7.1	2.40	2.30	2.20	1,2
7	-	992	980	1,972	5, 6	2	Auto	64.5	65	23.4	130,000	98.5	6.9	1.20	1.15	1.10	1,2
8	-	980	990	1,970	5, 6	2	Auto	61.5	62	22.2	124,000	98.6	6.9	1.20	1.15	1.10	1,2
9	-	727	722	1,449	5, 6	2	Auto	70.5	107	27.3	130,000	98.6	6.8	2.40	2.30	2.20	1,2
10	-	0	998	988	5, 6	2	Manual ^c	58.5	74	--	--	98.8	6.9	--	--	--	1
11	-	0	989	989	5, 6	2	Auto	57.0	72	23.2	124,000	98.8	6.9	2.40	2.30	2.20	1
12	-	1,000	0	1,000	5, 6	2	Auto	56.5	74	26.7	130,000	97.7	6.8	2.40	2.30	2.20	1
13	-	1,000	0	1,000	5, 6	2	Auto	57.5	72	25.4	124,000	97.5	7.0	2.40	2.30	2.20	1
14	-	990	983	1,973	5, 6	2	Auto	67.5	51	22.1	90,000	98.6	6.5	1.20	1.15	1.10	1,2
15	-	989	982	1,971	5, 6	2	Auto	66.5	50	22.2	90,000	98.6	6.6	1.20	1.15	1.10	1,2
16	-	999	986	1,985	5, 6	2	Auto	71.5	108	23.8	130,000	98.6	7.0	1.80	1.73	1.65	1,2
17	-	994	996	1,990	5, 6	2	Auto	77.0	116	23.1	124,000	98.6	6.9	1.80	1.73	1.65	1,2
18	-	993	980	1,973	5, 6	2	Auto	70.0	141	26.0	130,000	98.6	6.5	2.40	2.30	2.20	1,2
19	-	992	980	1,972	5, 6	2	Auto	74.5	188	31.2	130,000	96.0	6.5	2.40	2.30	2.20	1,2
20	-	992	980	1,972	5, 6	2	Auto	62.5	110	22.3	90,000	98.5	6.5	2.40	2.30	2.20	1,2

a. UV-AOP system operational conditions reported from UV human-machine interface (HMI).

b. Olympic well SM-4 was not in operation during testing.

c. The UV-AOP system was operated in manual mode during Test 10. Lamp power and H₂O₂ doses were manually set to simulate flow and scavenging setpoints determined by the UV system algorithm for similar Test 12 condition.



Table 2-4. Olympic AWTF Performance Test Source Water Quality Monitoring

Group	Parameter	Method	Unit	MDL	MRL	Condition C2 (50% SM-8, 50% SM-9) 10/02/2023	Condition 4 (50% SM-8, 50% SM-9) 10/03/2023	Condition 8 (50% SM-8, 50% SM-9) 10/04/2023	Condition 9 (50% SM-8, 50% SM-9) 10/05/2023	Condition 10 (100% SM-9) 10/05/2023	Condition 12 (100% SM-8) 9/22/2023
Background Water Quality	Aggressive Index	AWWA	--	--	--	12.4	12.4	12.2	12.3	12.5	12.1
	Alkalinity	SM 2320B	mg/L as CaCO ₃	7.2	20	380	370	370	380	420	310
	Aluminum	EPA 200.8	mg/L	0.0044	0.02	3.6	0.034	0.0087 J	0.024	0.0099 J	0.13
	Ammonia	EPA 350.1	mg/L as N	0.017	0.1	0.04 J	0.069 J	0.093 J	0.024 J	0.019 J	0.047 J
	Arsenic	EPA 200.8	mg/L	0.000074	0.0004	0.0038	0.00077	0.00071	0.00071	0.00067	0.001
	Barium	EPA 200.8	mg/L	0.00014	0.001	0.11	0.052	0.052	0.059	0.034	0.064
	Bicarbonate	SM 2320B	mg/L	1.7	10	379.1	369.1	369.5	379.3	419.1	309.7
	Boron	EPA 200.7	mg/L	0.003	0.01	0.12	0.13	0.13	0.13	0.12	0.14
	Bromide	EPA 300.1	mg/L	0.0085	0.05	0.68 M	0.72 M	0.78 M	0.78 M	0.94 M	0.55 M
	Calcium	EPA 200.7	mg/L	0.024	0.5	153	148	142	142	171	117
	CCPP	Lab calculated	mg/L as CaCO ₃	-100	-100	70.8	63.2	40.8	56.5	84.6	26.4
	Chlorate	EPA 300.0	mg/L	0.0017	0.01	0.077 M	0.094	0.091	0.091	0.099	0.072
	Chloride, Total	EPA 300.0	mg/L	0.19	0.5	130	130	130	130	140	130
	Chromium 6+	EPA 218.6	µg/L	0.0079	0.02	0.89	0.70	0.64	0.67	0.28	NR
	Color	SM 2120B	Color Number	--	3	BDL	BDL	BDL	BDL	BDL	BDL
	Copper	EPA 200.8	mg/L	0.00023	0.0005	0.017	0.00029 J	BDL	0.00024 J	0.00028 J	0.00062
	Fluoride, Total	EPA 300.0	mg/L	0.009	0.1	0.29	0.32	0.32	0.3	0.37	0.24
	Hardness	SM 2340C	mg/L as CaCO ₃	0.221	3.31	683	664	641	639	776	514
	Heterotrophic plate count	SM 9215B	MPN/100mL	2	2	> 740 ^a	> 740 ^a	> 740 ^a	> 740 ^{H^a}	> 740 ^a	> 740 ^a
	Iron, Dissolved	EPA 200.7	mg/L	0.005	0.03	BDL	BDL	BDL	BDL	BDL	BDL
	Iron, Total	EPA 200.7	mg/L	0.0065	0.03	5	0.1	0.041	0.065	0.031	0.21
	Lead	EPA 200.8	mg/L	0.000083	0.0002	0.0037	0.000095 J	BDL	BDL	BDL	BDL
	LSI	SM 2330B	--	-20	-10	0.474	0.426	0.198	0.339	0.482	0.164
	Magnesium	EPA 200.7	mg/L	0.039	0.5	72.9	71.4	69.3	68.9	85	54.2
	Manganese, Dissolved	EPA 200.8	mg/L	0.00011	0.001	0.0075	0.0063	0.0059	0.0062	0.00058	0.01
	Manganese, Total	EPA 200.8	mg/L	0.00011	0.001	0.23	0.011	0.0095	0.011	0.0022	0.027
	Nitrate	EPA 353.2	mg/L as N	0.04	0.2	5.3	6.0	5.5	5.7	4.2	6.4
	Nitrite	EPA 353.2	µg/L as N	42	100	51 J	BDL	50 J	BDL	BDL	76 J
	Odor	EPA 140.1	TON	--	1	1 J	1 J	1 J	1 J	1 J	1 J
	Phosphate	SM 4500P-B	mg/L as PO ₄	0.021	0.03	1.8	0.3	0.32	0.35	0.37	0.36
	Potassium	EPA 200.7	mg/L	0.086	0.5	4	3.2	3.1	3.1	3.2	3.1
	Selenium	EPA 200.8	mg/L	0.000067	0.0004	0.0041	0.0043	0.0041	0.0044	0.0049	0.0033
Silica, Total	EPA 200.7	mg/L	0.0086	0.1	58	37	35	36	32	40	
Silica, Dissolved	EPA 200.7	mg/L	0.0086	0.1	36	37	36	35	32	39	
Sodium	EPA 200.7	mg/L	0.13	1.0	90	820	86	87	71	100	
Strontium	EPA 200.7	mg/L	0.000036	0.0002	0.81	0.82	0.77	0.78	0.94	0.62	
Sulfate	SM 2320B	mg/L	0.72	1.5	290	290	290	290	320	230	



Table 2-4. Olympic AWTF Performance Test Source Water Quality Monitoring

Group	Parameter	Method	Unit	MDL	MRL	Condition C2 (50% SM-8, 50% SM-9) 10/02/2023	Condition 4 (50% SM-8, 50% SM-9) 10/03/2023	Condition 8 (50% SM-8, 50% SM-9) 10/04/2023	Condition 9 (50% SM-8, 50% SM-9) 10/05/2023	Condition 10 (100% SM-9) 10/05/2023	Condition 12 (100% SM-8) 9/22/2023
	Total Coliform	SM 9221B	MPN/100mL	1.8	1.8	23	13	2	13 H	BDL	BDL
	Total Dissolved Solids	SM 2540C	mg/L	4	10	1,000	1,100	1,100	1,100	1,200	640
	Total Organic Carbon	SM 5310B	mg/L	0.19	0.30	0.48	0.39	0.53	--	0.41	0.63
COPCS	1,1-Dichloroethane (1,1-DCA)	EPA 524.2	µg/L	0.27	0.50	--	--	0.53	0.58	BDL	1.2
	1,1-Dichloroethene (1,1-DCE)	EPA 524.2	µg/L	0.16	0.50	--	--	3.2	2.8	BDL	7.4
	1,2,3-Trichloropropane (1,2,3-TCP)	SRL 524M-TCP	µg/L	0.0012	0.005	--	--	0.019	0.022	BDL	0.04
	1,4-Dioxane	EPA 522	µg/L	1.4	1 ^c	--	--	20 M	25 M	3.2 J	49 M
	Carbon Tetrachloride	EPA 524.2	µg/L	0.27	0.50	--	--	0.60	0.64	BDL	1.5
	cis-1,2-Dichloroethene (Cis-1,2-DCA)	EPA 524.2	µg/L	0.25	0.50	--	--	1.2	1.0	BDL	2.1
	Tetrachloroethene (PCE)	EPA 524.2	µg/L	0.18	0.50	--	--	15	14	28	1.9
	Trichloroethene (TCE)	EPA 524.2	µg/L	0.18	0.50	--	--	32	35	0.84	77 ^b
	1,1,2-Trichloroethane	EPA 524.2	µg/L	0.19	0.50	--	--	BDL	BDL	BDL	BDL
	1,2-Dichloroethane	EPA 524.2	µg/L	0.24	0.50	--	--	BDL	BDL	BDL	BDL
	Benzene	EPA 524.2	µg/L	0.15	0.50	--	--	BDL	BDL	BDL	BDL
	Methyl tert-butyl ether (MTBE)	EPA 524.2	µg/L	0.94	2.0	--	--	BDL	BDL	BDL	BDL
	Perfluorooctanoic acid (PFOA)	EPA 537.1	ng/L	0.60	1.8	--	--	2.7	2.5	4.5	0.7 J
	trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.26	0.50	--	--	BDL	BDL	BDL	BDL
Vinyl Chloride	EPA 524.2	µg/L	0.18	0.50	--	--	BDL	BDL	BDL	BDL	

- a. Result exceeded the quantifiable concentration of method resulting in greater than value. Reevaluation of sample with greater dilution would result in analysis outside of method hold time.
 - b. This value is above the values used in the initial and contingency design estimated in the Step 4 report (34 and 71 µg/L for the highest well, SM-4, respectively); however higher (than design) removal was demonstrated during the UV-AOP performance test and complete removal was achieved during the 7-day acceptance test, as described in Section 4.5.
 - c. Recommended MRL per DDW ([1,4-Dioxane | California State Water Resources Control Board](#))
- µg/L = micrograms per liter
 AWWA = American Water Works Association
 BDL = below detection limit (of reported analytical method)
 CaCO₃ = calcium carbonate
 CCPP = calcium carbonate precipitation potential
 EPA = United States Environmental Protection Agency
 LSI = Langlier Saturation Index
 MDL = method detection limit
 mL = milliliters
 M = sample was diluted prior to analysis due to high concentration or nature of matrix interferences. The MDL and MRL were raised due to the dilution.
 MPN = most probable number
 MRL = method reporting limit
 N = nitrogen
 Ng/L = nanograms per liter
 PO₄ = phosphate
 TON = threshold odor number



2.4 Greensand Performance Test

The greensand performance test was conducted concurrently with the UV-AOP performance test to confirm anticipated pretreatment requires for iron (≤ 0.3 mg/L) and manganese (≤ 0.05 mg/L) were achieved per UV-AOP and RO Contract Specification Section 46-66-13 and Section 46-63-23, respectively. Greensand performance test conditions (i.e., well blends and flows) followed conditions established for UV-AOP performance testing detailed in Section 2.5.

2.4.1 Operational and Performance Results

A summary of the greensand performance test operational and water quality results is provided in Table 2-5. Grab samples for iron and manganese were collected for each test condition at the greensand feed (S4) and greensand effluent (S8) sample locations. Grab samples were sent to an external analytical laboratory (Weck) for analysis using EPA 200.7 and EPA 200.8, respectively.

Reported greensand feed concentrations ranged from 0.011 to 3.9 mg/L total iron and <0.00083 (ND, or non-detect) to 0.36 mg/L total manganese. All greensand effluent samples achieved the ≤ 0.3 mg/L iron and ≤ 0.05 mg/L manganese performance criteria for all test conditions. The City typically operates with a treatment goal of a combined iron and manganese concentration of <0.06 mg/L, which was achieved for all test conditions except test condition C2, which had 0.093 mg/L combined iron and manganese. The Olympic well sodium hypochlorite chemical addition system was not in operation during the performance test. Greater iron and manganese removal through the greensand system is expected with a 1-2 mg/L free chlorine residual from the Olympic wells through the greensand filters. Greensand effluent field samples for silt density index (SDI), free chlorine, and turbidity were collected daily for each unique test condition. Greensand effluent SDI ranged from 1.07 to 1.75, turbidity ranged from 0.08 to 0.45 nephelometric turbidity units (NTU), and free chlorine residual was 0 to 0.05 mg/L.

2.4.2 Documentation of System or Equipment Failures or Outages

No greensand system or equipment failures or outages were observed during the Olympic AWTF Performance Test.

This page intentionally left blank.



Table 2-5. Greensand Performance Test Results

No.	Test ID	Date	Time	Olympic Well Blend ^a			Greensand Feed (S4)				Greensand Effluent (S8)							
				SM-8	SM-9	Total Flow (gpm)	Iron (mg/L) ^b		Manganese (mg/L) ^c		Iron (mg/L)		Manganese (mg/L)		Combined Iron and Manganese (mg/L) ^d	SDI	Free Cl ₂ (mg/L)	Turbidity (NTU)
							Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved				
C1	PT-GSC1	10/2/2023	14:40	1,000	1,000	2,000	2.9	BDL	0.11	0.0035 J	0.035	BDL	0.0044 J	BDL	0.039 J	--	0.02 ^e	0.31 ^e
C2	PT-GSC2	10/2/2023	13:25	1,002	1,001	2,003	2.7	BDL	0.092	0.0044 J	0.088	BDL	0.0053	BDL	0.093	--	0.05	e
1	PT-GS1	10/2/2023	15:35	998	999	1,997	0.33	BDL	0.016	0.0062	0.021 J	BDL	0.0033 J	0.012	0.024 J	--	e	e
2	PT-GS2	10/2/2023	15:40	998	999	1,997	0.48	BDL	0.021	0.0057	0.022 J	BDL	0.0034 J	BDL	0.025 J	--	e	e
3	PT-GS3	10/2/2023	16:22	1,000	999	1,999	0.053	BDL	0.0065	0.0048 J	0.013 J	BDL	0.0038 J	BDL	0.017 J	--	e	e
4	PT-GS4	10/3/2023	10:45	991	991	1,982	0.045 ^f	BDL	0.006 ^f	0.0055 ^f	BDL	BDL	BDL	BDL	BDL	g	0.02 ^g	0.20 ^g
5	PT-GS5	10/3/2023	11:30	991	990	1,981	0.042	BDL	0.0065	0.0045 J	BDL	BDL	BDL	BDL	BDL	g	g	g
6	PT-GS6	10/3/2023	14:04	994	994	1,988	3.9	BDL	0.36	0.0054	BDL	0.0066	BDL	BDL	BDL	g	g	g
7	PT-GS7	10/4/2023	8:50	986	986	1,972	0.059	BDL	0.0073	0.0045 J	BDL	BDL	BDL	BDL	BDL	h	h	h
8	PT-GS8	10/4/2023	9:10	985	985	1,970	0.039 ^f	BDL	0.0064 ^f	0.0041 J ^f	BDL	BDL	BDL	BDL	BDL	h	0.02 ^h	0.08 ^h
9	PT-GS9	10/5/2023	8:50	725	724	1,449	0.089	BDL	0.0081	0.0041 J	BDL	BDL	BDL	BDL	BDL	1.07 ⁱ	0.00 ⁱ	0.21 ⁱ
10	PT-GS10	10/5/2023	13:39	494	494	988	0.011 J	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	j	j	j
11	PT-GS11	10/5/2023	15:20	495	494	989	0.03	BDL	0.0096	BDL	BDL	BDL	BDL	BDL	BDL	1.42 ^j	0.01 ^j	0.35 ^j
12	PT-GS12	9/22/2023	15:00	500	500	1,000	0.091	BDL	0.015	0.0092	BDL	BDL	BDL	BDL	BDL	--	0.00	0.45
13	PT-GS13	9/22/2023	16:00	500	500	1,000	0.10	BDL	0.015	0.0095	BDL	BDL	BDL	BDL	BDL	--	0.00	0.39
14	PT-GS14	10/4/2023	15:25	987	986	1,973	0.42	BDL	0.064	0.0048 J	BDL	BDL	0.0021 J	BDL	0.0021 J	h	h	h
15	PT-GS15	10/5/2023	16:00	985	986	1,971	0.066	BDL	0.016	0.0046 J	BDL	BDL	0.0017 J	BDL	0.0017 J	i	i	i
16	PT-GS16	10/3/2023	14:30	992	993	1,985	0.032	BDL	0.0054	0.0048 J	BDL	BDL	BDL	BDL	BDL	1.75 ^g	g	g
17	PT-GS17	10/3/2023	14:53	995	995	1,990	0.019 J	BDL	0.0052	0.0042 J	BDL	BDL	BDL	BDL	BDL	g	g	g
18	PT-GS18	10/4/2023	14:20	986	987	1,973	0.014 J	BDL	0.0055	0.0043 J	BDL	BDL	0.0018 J	BDL	0.0018 J	h	h	h
19	PT-GS19	10/4/2023	13:43	986	986	1,972	0.016 J	BDL	0.0049 J	0.0043 J	BDL	BDL	0.0019 J	BDL	0.0019 J	1.38 ^h	h	h
20	PT-GS20	10/4/2023	14:50	986	986	1,972	0.12	BDL	0.016	0.0044 J	BDL	BDL	0.0017 J	BDL	0.0017 J	h	h	h

- a. Olympic well SM-4 was not in operation during testing.
- b. Iron was measured using method EPA 200.7. Total iron was reported with an MDL of 0.0065 mg/L and MRL of 0.03 mg/L. Dissolved iron was reported with MDL of 0.005 mg/L and MRL of 0.03 mg/L.
- c. Manganese was measured using method EPA 200.8. Total manganese was reported with an MDL of 0.00083 mg/L and MRL of 0.05 mg/L. Dissolved manganese was reported with an MDL of 0.0027 mg/L and MRL of 0.005 mg/L.
- d. Sum of total iron and total manganese concentrations.
- e. Field samples were collected and reported for test C1.
- f. Duplicate sample was collected for this condition. The average value is reported between the two samples.
- g. Field samples were collected and reported for tests 4 and 16.
- h. Field samples were collected and reported for tests 8 and 19.
- i. Field samples were collected and reported for test 9.
- j. Field samples were collected and reported for test 11.

Cl₂ = chlorine
 BDL = below detection limit (reported by analytical method)
 Reported qualifier "J" indicates the measured concentration was below the MRL.



This page intentionally left blank.



2.5 UV-AOP Performance Test

Performance testing of the UV-AOP system was conducted to confirm that the system operates according to the design specifications and performance requirements. The primary treatment performance requirements for the UV-AOP system are 2.4-log removal of 1,4-dioxane, 2.2-log removal of TCE, and 2.3-log removal of PCE. The test team, working with Trojan field technicians, performed 22 UV-AOP performance tests with ranging source water Olympic well blends and flow rates, feed water UVT and pH, and system inactivation setpoints. Each test began with confirmation of operational conditions and feed water quality, including verification of flow rate, H₂O₂ dosing, and UVT. The following section provides a summary of the UV-AOP performance test and results. A detailed report on the UV-AOP Performance Test was also developed by Trojan and is provided in Appendix H.

2.5.1 UV-AOP Performance Test Procedures

Prior to the UV-AOP performance test, a step tracer study was conducted at 1,000 gpm to confirm the time required to reach steady-state conditions through the UV reactor following changes to water quality test conditions. The UV tracer test injected Super Hume®, a UVT modifying organic solution, at an injection port upstream of the UV-AOP influent sampling port (downstream of H₂O₂ injection, immediately prior to the UV reactor). Grab samples at the UV-AOP influent and effluent sample ports were collected and analyzed for UVT and converted to UV absorbance (UVA), at time intervals ranging from 0.5 to 4 minutes. The UVA results in Figure 2-1 show that 3 to 4 minutes was required to reach steady state at the influent sample port and that 8 minutes were required to reach steady state at the effluent sample port. An anomalous low UVA sample at the influent sample port was recorded at 10 minutes. To be conservative, a steady-state time of 20 minutes was used for 1,000 gpm UV-AOP performance test conditions, in which influent and effluent grab samples were collected 20 minutes after the start of constant injection of Super Hume® and 1,4-dioxane stock solution. The time to reach steady state is inversely proportional to flow, steady state times of 15 and 10 minutes were used for test conditions at 1,500 and 2,000 gpm, respectively.

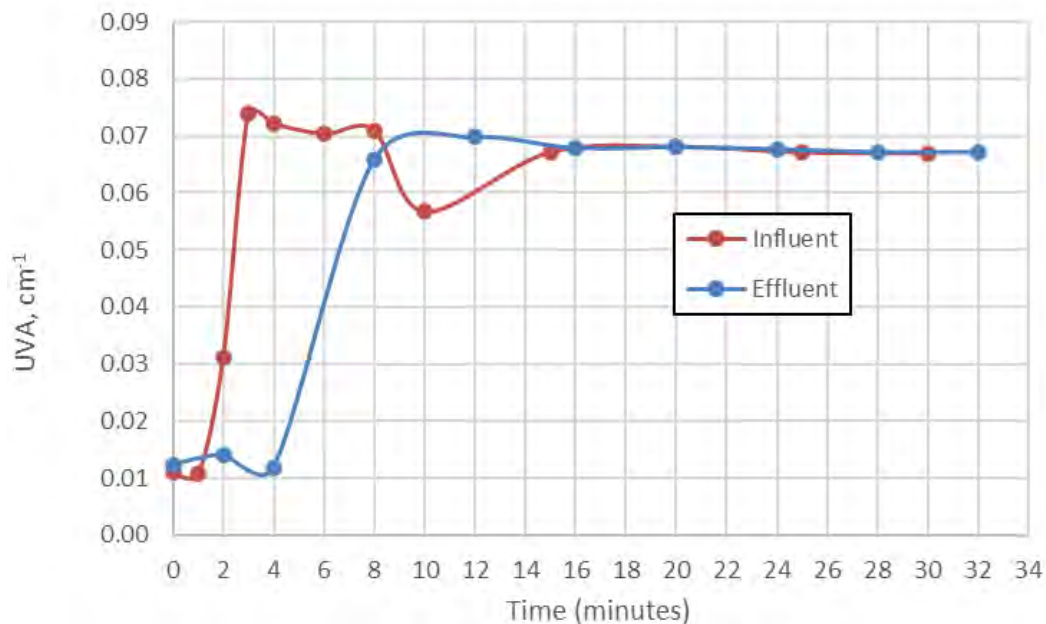


Figure 2-1. Steady-state times for UV-AOP Performance Test

1,4-dioxane was used as an indicator compound to evaluate UV-AOP treatment performance. 1,4-dioxane is a common indicator compound for UV-AOP systems, because it is not readily removed through photolysis (UV only) but is removed preferentially by hydroxyl radical oxidation (UV + H₂O₂). Additionally, 1,4-dioxane is readily soluble in water, which enables effective continuous spiking during testing to demonstrate treatment performance. Spiking higher concentrations (compared to ambient source water concentrations) of indicator compounds is necessary to fully quantify log removals across the UV-AOP system without being limited by analytical MDLs in water samples. Thus, for each UV-AOP performance test condition, 1,4-dioxane was spiked into the UV-AOP feed water. Super Hume® was fed simultaneously to achieve target UVTs. Operating conditions for each test were held constant for the steady-state period corresponding to the flow rate. Grab samples were collected at the UV-AOP influent and effluent sample ports. Samples were collected and analyzed for UVT and H₂O₂ concentration, and separate samples were sent to an external analytical laboratory (Weck) for 1,4-dioxane, PCE, and TCE analysis. At the time of sample collection, system parameters, including UV intensity, UV lamp power, treatment compliance log removal setpoints, H₂O₂ dose, and system flow rate, were recorded from the system's human machine interface (HMI).

2.5.2 Operational and Performance Results

The 22 UV-AOP performance test conditions were selected to evaluate a range of source water blends, design flows, and UVT. Additionally, various system setpoints, including ST and target log removal, were modified to better understand the ability of the UV control system to adjust to different treatment targets and water qualities while continuing to meet treatment targets. The manufacturer (Trojan) used a conservative ST of 130,000 s⁻¹ for design of the UV-AOP system during the design phase of the project. A conservative approach was taken given that there were relatively few samples collected from operating Olympic wells and analyzed for ST prior to the design phase. To measure ST in Olympic well water at a time much closer to the performance test, technicians collected and sent water samples to Trojan 3 weeks prior to performance testing to confirm water quality consistency. Trojan evaluated the ST at an unadjusted pH and at an adjusted pH of 6.5. These analyses indicated an ST of 124,000 s⁻¹ and 90,000 s⁻¹, respectively, at ambient pH and pH 6.5, which indicated that water quality was consistent and relatively unchanged since the design phase.

UV-AOP performance test conditions evaluated design ST (130,000 s⁻¹), measured ST (124,000 s⁻¹) and pH-adjusted ST (90,000 s⁻¹). Tests C1, C2, 1, 2, and 3 were conducted in manual mode, where user-defined lamp power and H₂O₂ dose were input manually. All other test conditions were operated in automatic mode, where the UV-AOP algorithm-controlled lamp power and H₂O₂ dosing concentration to achieve specified log removal compliance setpoints, based on system flow and UVT. Test 10 was the only condition that was planned to be operated in automatic mode but was conducted in manual mode; immediately prior to execution of Test 10, an emergency shutdown of the UV system was implemented. This shutdown was due to a split in the H₂O₂ chemical feed line. Following the feed line's repair, limited time was available within the daily Olympic AWTF operational window on that test day. Insufficient time was available to reboot the UV control system to operate in automatic mode. Thus, Test 10 was conducted in manual mode with user-selected lamp power and H₂O₂ dose to simulate the planned Test 10 conditions. User input values were predicted using real-time UVT values and UV control system algorithm outputs (i.e., lamp power and H₂O₂ dose) generated from the UV algorithm on a remote Trojan computer.

The original planned test matrix included flows from all three wells; however, as discussed with DDW on August 9, 2023, the SM-4 well is no longer operable and is planned for replacement. The test matrix was adjusted using Olympic wells SM-8 and SM-9 to make up the target flow source water blends. The executed UV-AOP performance test is summarized in Table 2-6 and detailed below:

- Tests C1 and C2 were control tests to confirm no treatment when the UV lamps are not operating (no power), or when no H₂O₂ is present (no oxidant dosing), respectively.
- Tests 1 and 2 were duplicate conditions completed in manual mode treating 50/50 SM-8 and SM-9 well blends at the design flow of 2,000 gpm. The UVT and H₂O₂ were set to design conditions of 96 percent and 40 mg/L, respectively. The UV lamp power was set to 84 percent to simulate end-of-lamp life and lamp fouling design conditions. The ST was entered at the design value of 130,000 s⁻¹. The system was operated in manual mode, in which the lamp power and H₂O₂ were fixed manually as described above and not via the UVFlex algorithm.
- The test conditions for Test 3 were identical to Tests 1 and 2 except that the ST was entered at the measured ST of 124,000 s⁻¹, which required a slightly lower predicted lamp power (83 percent) and H₂O₂ dose (37 mg/L) to meet treatment targets.
- Tests 4, 5, and 6 were conducted in automatic mode at design flow (2,000 gpm), design ST (130,000 s⁻¹), and design log-reduction target of 2.4-log, 2.3-log, and 2.2-log 1,4-dioxane, PCE, and TCE, respectively. Tests 4, 5, and 6 were conducted at 96 percent, 93 percent, and ambient UVT (98 to 99 percent), respectively.
- Tests 7 and 8 were conducted at 50% reduced design log-removal setpoints of 1.2-log, 1.15-log, and 1.1-log 1,4-dioxane, PCE, and TCE, respectively. Test 7 was conducted using the design ST (130,000 s⁻¹), and Test 8 was conducted using the measured ST (124,000 s⁻¹).
- Test 9 was conducted at design conditions similar to Test 6, except at reduced flow of 1,500 gpm with a 50/50 SM-8 and SM-9 blend.
- Test 10 was conducted at design conditions with reduced flow of 1,000 gpm, all from SM-9. Test 10 was conducted in manual mode simulating design log reduction targets and ST (130,000 s⁻¹). User-defined lamp power of 58.5 percent and H₂O₂ dose of 27.7 mg/L were input following predicted setpoints from the UV system algorithm (available from Trojan's remote computer).
- Test 11 followed similar flow conditions as test 10 with measured ST of 124,000 s⁻¹.
- Tests 12 and 13 were conducted with reduced flow of 1,000 gpm at design conditions similar to Tests 10 and 11, but with all flow from SM-8. Tests 12 and 13 were conducted with STs of 130,000 s⁻¹ and 124,000 s⁻¹, respectively.
- Tests 14 and 15 were conducted at 50 percent reduced log removal targets and a pH-adjusted ST of 90,000 s⁻¹. Tests 14 and 15 were operated at a design flow of 2,000 gpm, with SM-8 and SM-9 wells each providing half of the flow and pH adjusted to 6.5 and 6.6, respectively.
- Tests 16 and 17 were operated at reduced design log removal setpoints (i.e., 1.8-log 1,4-dioxane) at ambient pH and ST of 130,000 s⁻¹ and 124,000 s⁻¹, respectively.
- Tests 18, 19, and 20 were conducted at design log removal setpoints and adjusted pH of 6.5. Tests 18 and 19 were operated at design ST (130,000 s⁻¹) with ambient and 96 percent UVT, respectively. Test 20 was operated at a pH-adjusted ST of 90,000 s⁻¹ at ambient UVT.

Table 2-6. UV-AOP Performance Test Conditions

No.	Test ID	Date	Time	Olympic Well Blend			Unit in Operation	Control Mode	Lamp Sections	Lamp Power (%)	Total Lamp Power (kW)	Entered ST (s ⁻¹)	Feed pH	Online UVT (%)	Online H ₂ O ₂ (mg/L)		Compliance Setpoint		
				SM-8	SM-9	Flow (gpm)									Feed	Residual	1,4-dioxane	PCE	TCE
C1	PT-UVC1	10/2/23	14:37	50%	50%	2,000	2	Manual	0	0	0.0	130,000 ^a	7.1	97.8	39.6	– ^b	– ^a	– ^a	– ^a
C2	PT-UVC2	10/2/23	9:10	50%	50%	2,003	2	Manual	11	100	277	130,000 ^a	7.0	97.6	0.0	– ^b	– ^a	– ^a	– ^a
1	PT-UV1	10/2/23	15:35	50%	50%	1,997	2	Manual	11	84.0	233	130,000 ^a	7.0	95.6	39.7	– ^b	– ^a	– ^a	– ^a
2	PT-UV2	10/2/23	15:40	50%	50%	1,997	2	Manual	11	84.0	233	130,000 ^a	7.0	95.7	39.7	– ^b	– ^a	– ^a	– ^a
3	PT-UV3	10/2/23	16:22	50%	50%	1,999	2	Manual	11	83.0	230	124,000 ^a	7.0	95.8	37.0	– ^b	– ^a	– ^a	– ^a
4	PT-UV4	10/3/23	10:45	50%	50%	1,982	2	Auto	10	77.5	195	130,000	7.0	95.9	30.7	16.1	2.4	2.3	2.2
5	PT-UV5	10/3/23	11:30	50%	50%	1,981	2	Auto	11	95.0	263	130,000	7.1	93.5	38.3	21.4	2.4	2.3	2.2
6	PT-UV6	10/3/23	14:04	50%	50%	1,988	2	Auto	7	82.0	145	130,000	7.1	98.5	28.6	14.2	2.4	2.3	2.2
7	PT-UV7	10/4/23	8:50	50%	50%	1,972	2	Auto	4	64.5	65	130,000	6.9	98.5	23.4	17.0	1.2	1.15	1.1
8	PT-UV8	10/4/23	9:10	50%	50%	1,970	2	Auto	4	61.5	62	124,000	6.9	96.2	22.2	16.0	1.2	1.15	1.1
9	PT-UV9	10/5/23	8:48	50%	50%	1,449	2	Auto	6	70.5	107	130,000	6.8	98.6	27.3	12.8	2.4	2.3	2.2
10	PT-UV10	10/5/23	14:35	0%	100%	988	2	Manual	5	58.5	74	130,000	6.9	98.8	27.7 ^c	– ^b	2.4	2.3	2.2
11	PT-UV11	10/5/23	15:20	0%	100%	989	2	Auto	5	57.0	72	124,000	6.9	98.8	23.2	9.5	2.4	2.3	2.2
12	PT-UV12	9/22/23	15:00	100%	0%	1,000	2	Auto	5	56.5	74	130,000	6.8	97.7	26.7	11.9	2.4	2.3	2.2
13	PT-UV13	9/22/23	16:00	100%	0%	1,000	2	Auto	5	57.5	72	124,000	7.0	97.5	25.4	11.2	2.4	2.3	2.2
14	PT-UV14	10/4/23	15:25	50%	50%	1,973	2	Auto	3	67.5	51	90,000	6.5 ^d	98.6	22.1	16.8	1.2	1.15	1.1
15	PT-UV15	10/4/23	16:00	50%	50%	1,971	2	Auto	3	66.5	50	90,000	6.6 ^d	98.6	22.2	16.8	1.2	1.15	1.1
16	PT-UV16	10/3/23	14:30	50%	50%	1,985	2	Auto	6	71.5	108	130,000	7.0	98.6	24.2 ^c	15.8 ^c	1.8	1.73	1.65
17	PT-UV17	10/3/23	14:53	50%	50%	1,990	2	Auto	6	77.0	116	124,000	6.9	98.6	23.1	12.0	1.8	1.73	1.65
18	PT-UV18	10/4/23	14:20	50%	50%	1,973	2	Auto	8	70.0	141	130,000	6.5 ^d	98.6	26.0	12.2	2.4	2.3	2.2
19	PT-UV19	10/4/23	13:43	50%	50%	1,972	2	Auto	10	74.5	188	130,000	6.5 ^d	96.0	31.2	16.5	2.4	2.3	2.2
20	PT-UV20	10/4/23	14:50	50%	50%	1,972	2	Auto	7	62.5	110	90,000	6.5 ^d	98.5	22.3	11.6	2.4	2.3	2.2

a. In manual operation mode, log removal setpoints and STs are not input or implemented by the UV system because the UV lamp power and H₂O₂ dose are user inputs.

b. In manual operation mode, H₂O₂ residual is not predicted by the UV control system.

c. Recording of online H₂O₂ feed and residual values were inadvertently not recorded. Measured field values are reported in Table 2-7.

d. Test condition with adjust pH using sulfuric acid.



UVT and H₂O₂ Online Monitors

Grab sample UVT measurements were compared with online UVT monitor results, and measured H₂O₂ concentrations were compared to programmable logic controller (PLC)-calculated concentrations, as summarized in Table 2-7 and shown on Figure 2-2 and Figure 2-3.

Figure 2-2 shows that the online UVT measurements and grab sample measurements are in good agreement with the online monitor reading. The UV control algorithm calculates the UVT of water entering the UV-AOP system from the online UVT value and the H₂O₂ concentration in the UV-AOP feed water. The alignment with the online monitor and grab sample measurements provides confidence in the calculated method used by the system controls to predict influent UVT. Similarly, the H₂O₂ grab sample measurements and PLC-predicted concentrations demonstrated good agreement (Figure 2-3), providing confidence in the H₂O₂ dosing system and calculated influent and effluent H₂O₂ concentrations used by the UV control algorithm to predict treatment performance. Further discussion about online UVT monitors and PLC calculated H₂O₂ concentrations are presented in the Trojan Report (Appendix H).

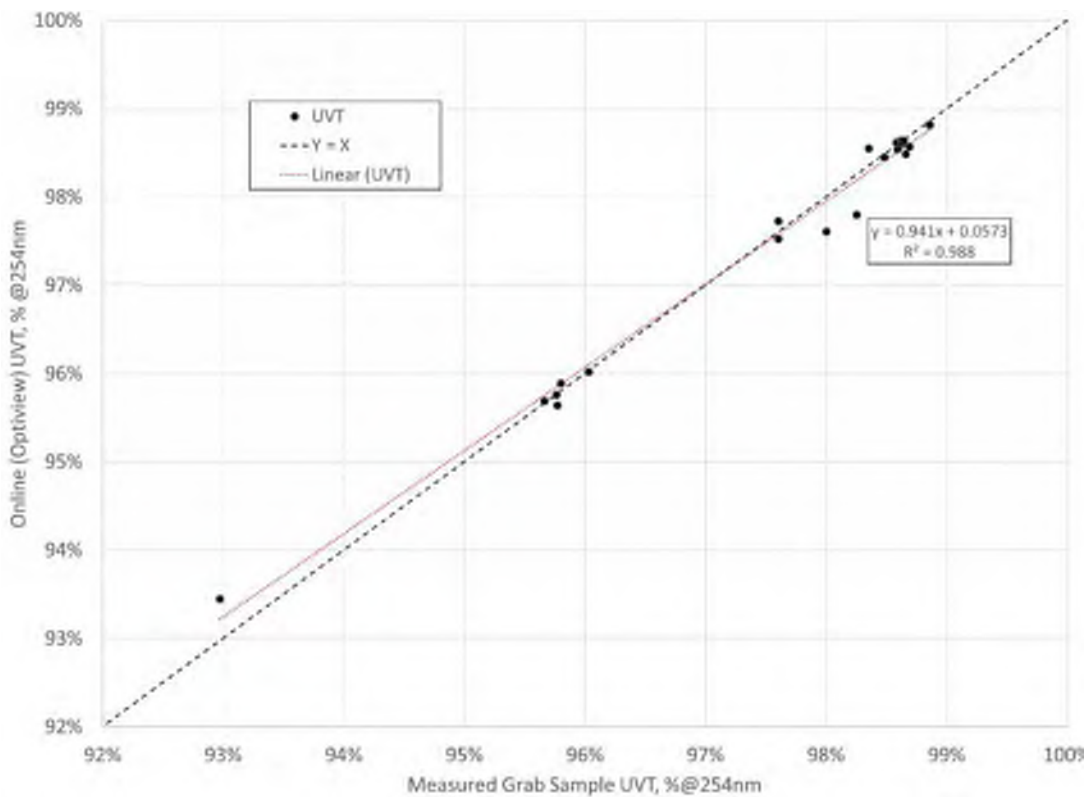


Figure 2-2. Comparison between online UVT and grab sample UVT at influent sample port

Figure copied from the Trojan UV-AOP Performance Test Report.

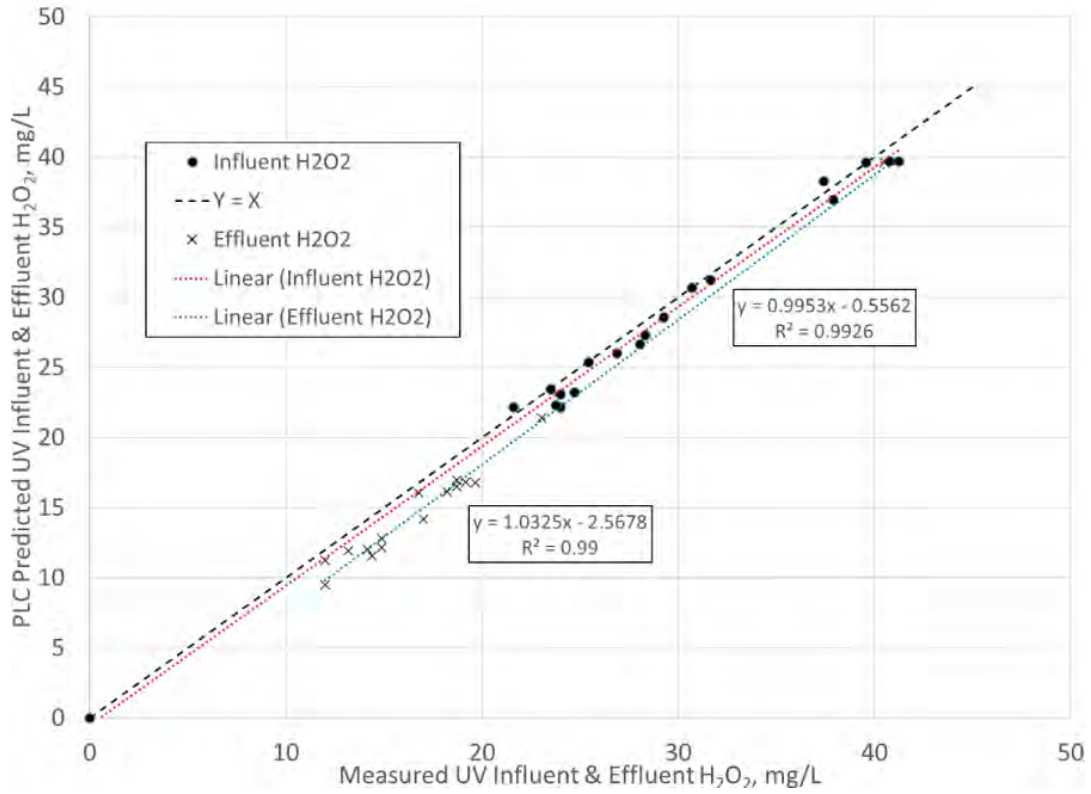


Figure 2-3. Comparison between measured and PLC H₂O₂-calculated concentrations

Figure copied from Trojan UV-AOP Performance Test Report

Table 2-7. UV-AOP Performance Measured UVT and H ₂ O ₂ Results													
No	Test ID	UVT (%)								H ₂ O ₂ (mg/L)			
		Pre-H ₂ O ₂		Post-H ₂ O ₂			UV Effluent			UV Influent			UV Effluent
		Online (Optiview)	Grab	Grab	PLC Calculated (Online + H ₂ O ₂)	Calculated Background UVT (Grab - H ₂ O ₂)	PLC Calculated (Online + Calc H ₂ O ₂ Residual)	Grab	Calculated Background (Grab UVT - Grab H ₂ O ₂ Residual)	PLC-requested Dose	PLC-calculated Dose	Grab	Grab
C1	PT-UVC1	97.8	98.3	93.2	92.8	98.2	92.8	93.2	98.3	39.6	39.6	39.6	40.5
C2	PT-UVC2	97.6	98.0	98.0	97.6	98.0	97.6	98.2	98.2	0.0	0.0	0.0	0.0
1	PT-UV1	95.6	95.8	90.6	90.7	95.6	Not Available ^a	94.6	97.5	39.7	Not Available ^a	40.8	23.3
2	PT-UV2	95.7	95.7	90.4	90.8	95.5	Not Available ^a	94.6	97.5	39.7	Not Available ^a	41.2	23.0
3	PT-UV3	95.8	95.8	91.0	91.2	95.7	Not Available ^a	94.9	97.6	37.0	Not Available ^a	37.9	21.3
4	PT-UV4	95.9	95.8	91.8	92.1	95.7	93.9	95.2	97.6	30.7	16.1	30.7	18.2
5	PT-UV5	93.5	93.0	88.6	88.8	93.2	90.8	92.8	95.7	38.3	21.4	37.4	23.0
6	PT-UV6	98.5	98.6	94.9	94.9	98.6	96.7	97.0	99.3	28.6	14.2	29.3	17.0
7	PT-UV7	98.5	98.5	95.5	95.4	98.5	96.3	96.6	99.1	23.4	17.0	23.5	18.7
8	PT-UV8	98.6	98.6	95.8	95.8	98.6	96.5	96.9	99.1	22.2	16.0	21.6	16.8
9	PT-UV9	98.6	98.4	94.8	95.0	98.5	96.9	97.3	99.2	27.3	12.8	28.3	14.9
10	PT-UV10	98.8	98.9	95.4	95.3	99.0	Not Available ^a	97.6	99.7	Not Recorded ^b	Not Available ^a	27.7	15.7
11	PT-UV11	98.8	98.9	95.8	95.8	99.0	97.6	97.9	99.5	23.2	9.5	24.7	12.0
12	PT-UV12	97.7	97.6	94.7	94.3	98.3	96.2	97.6	99.3	26.7	11.9	28.1	13.2
13	PT-UV13	97.5	97.6	94.9	94.3	98.1	96.1	97.5	99.1	25.4	11.2	25.4	12.0
14	PT-UV14	98.6	98.7	95.7	95.7	98.8	96.4	96.7	99.3	22.1	16.8	24.0	19.7
15	PT-UV15	98.6	98.6	95.7	95.8	98.8	96.5	96.7	99.2	22.2	16.8	24.0	19.2
16	PT-UV16	NA	98.6	95.5	Not Recorded ^b	98.6	Not Available ^a	97.2	99.3	Not Recorded ^b	Not Available ^a	24.2	15.8
17	PT-UV17	98.6	98.6	95.5	95.6	98.6	97.1	97.5	99.3	23.1	12.0	24.0	14.2
18	PT-UV18	98.6	98.6	95.2	95.3	98.6	97.1	97.3	99.2	26.0	12.2	26.9	14.9
19	PT-UV19	96.0	96.0	91.9	92.1	95.9	93.9	95.4	99.8	31.2	16.5	31.7	18.7
20	PT-UV20	98.5	98.7	95.7	95.6	98.7	97.0	97.4	99.3	22.3	11.6	23.7	14.4

a. PLC-calculated H₂O₂ dose is not available for manual test conditions.
 b. PLC value was inadvertently not recorded during sample collection.

This page intentionally left blank.



Feed Water Quality

Grab samples were collected throughout the UV-AOP performance test and sent to Trojan for feed water quality and hydroxyl radical ST analysis. The primary contributors to ST included alkalinity, total organic compounds (TOC), nitrate, and nitrite. For the scavenging contributed by alkalinity, pH can play a significant role when source water pH approaches the carbonic acid pK_{a1} of 6.35, resulting in a reduction of bicarbonate concentration in favor of carbonic acid. With bicarbonate exhibiting a greater scavenging demand, reducing feed water pH will result in a decrease in hydroxyl radical scavenging.

A summary of feed water quality and scavenging reported by Trojan is provided in Table 2-8. At ambient pH conditions, the UV-AOP feed water ST ranged from 86,250 to 128,000 s^{-1} across the SM-8 and SM-9 source water blends. The lowest measured ST of 85,300 was measured in the reduced pH UV-AOP feed water sample. The measured grab sample pH at the Trojan laboratory was higher (6.96) compared to the onsite pH (6.5) during the PT-UV20 test condition, due to the time between sample collection and analysis at the Trojan laboratory (i.e., shipping time). Thus, the on-site ST is expected to be lower than the measured ST from the Trojan laboratory. Further discussion about feed water quality and measured hydroxyl radical scavenging is detailed in the Trojan Report (Appendix H).

Table 2-8. Trojan Feed Water Quality Results

Parameter	PT-UV12 Sample (9/22/23 13:00)	PT-UV2 Sample (10/2/23 15:40)		PT-UV17 Sample (10/3/23 15:45)		PT-UV20 Sample (10/4/23 15:00)		PT-UV9 Sample (10/5/23 9:00)	PT-UV9 Sample (10/5/23 13:25)
	UV Feed	UV Feed	UV Feed	Pre-Greensand	UV Feed	UV Feed	UV Effluent	UV Feed	UV Feed
Sample Location									
1,4-dioxane Spike (µg/L)	-	-	350	-	-	176	176	-	-
Super Hume Spike	-	-	Yes	-	-	-	-	-	-
pH Adjustment	-	-	-	-	-	Yes	Yes	-	-
Well Blends	SM-8	SM-8, SM-9 (50:50)	SM-8, SM-9 (50:50)	SM-8, SM-9 (50:50)	SM-8, SM-9 (50:50)	SM-8, SM-9 (50:50)	SM-8, SM-9 (50:50)	SM-8, SM-9 (50:50)	SM-9
UVT (%)	96.7	98.3	96.4	99.0	98.5	98.6	99.2	99.1	98.8
pH	7.35	7.57	7.70	7.71	7.58	6.96	6.79	7.22	7.61
TOC (mg/L)	1.03	0.54	0.76	0.95	0.55	0.65	0.62	0.49	0.87
Alkalinity (mg/L as CaCO ₃)	335	377	387	385	379	305	307	377	432
Nitrate (mg/L as NO ₃)	29.1	23.5	23.6	22.7	22.8	22.7	22.5	25.0	19.0
Nitrite (mg/L as NO ₂)	Not Analyzed	0.011	0.014	Not Analyzed	0.013	0.011	0.103	0.010	Not Analyzed
Hydroxyl Radical ST (s ⁻¹)	86,250	Not Analyzed	128,000	Not Analyzed	107,530	85,300	Not Analyzed	Not Analyzed	90,000

1,4-dioxane Log Removal Treatment Performance

1,4-dioxane measurements were collected in duplicate samples at the UV influent and effluent sample locations. Table 2-9 summarizes measured 1,4-dioxane concentrations and calculated relative standard deviation (RSD) between the duplicate samples. Average log reductions were calculated based on the average influent and average effluent concentrations for each test condition. All 1,4-dioxane samples concentrations were above the analytical MDL (0.028 µg/L), which enabled quantifiable log removal values to be reported for each test condition. The RSD for UV influent samples ranged from 0 to 25 percent and were all considered to be acceptable; however, the RSD for the UV effluent samples ranged from 0 to 108 percent with effluent results for Tests 6 and 16 having RSD values above 100 percent. Test 16 UV effluent replicates reported 1,4-dioxane concentrations of 0.32 and 2.4 µg/L. Given that Test 17 was operated at identical conditions to Test 16 except at a lower ST of 124,000 s⁻¹, Test 16 is expected to achieve greater log removal relative to Test 17. Thus, it is recommended to consider the 2.4 µg/L measurement for Test 16 as an anomalous result and rely on the 0.32 µg/L measured value for log removal evaluations (shown in parenthesis in Table 2-9). Similarly, it is recommended to consider the Test 6 elevated replicate measurement of 2.2 µg/L as an anomalous result and use the 0.37 µg/L measured value for log removal evaluations. All other UV effluent samples' duplicate measurements had an RSD of 0 to 34 percent and were considered acceptable.

Comparison of 1,4-dioxane-measured log removals and the UV system compliance, operational, and predicted log removal values are illustrated in Figure 2-4. The blue bars represent the measured 1,4-dioxane log removals for each test condition, with black arrows above Tests 6 and 16 indicating the true measured log removals should be 3.00 and 3.08, respectively, as discussed above. The compliance and operating log removal targets are shown in the red and green bars, respectively. Compliance log removal setpoints were input according to each test condition (Table 2-6), and operational log removal setpoints were set to be 10 percent higher than the compliance level. The PLC-predicted log removal is shown with the purple bar. The PLC-predicted log removals are calculated using real-time, online measurements of flow, UVT, H₂O₂ dose, UV lamp power, and entered ST. PLC-predicted log removals are not available for manual test conditions (i.e., Tests C1, C2, 1, 2, 3, and 10). Additionally, log removal setpoints for manual mode are irrelevant since the PLC is not controlling operations (i.e., UV power or H₂O₂ dose).

Figure 2-4 also demonstrates that the UV system exceeded the target and predicted log removal values for all tests except Tests 7, 8, 14, and 15. For those four tests, which had reduced log removal compliance targets, Tests 7, 8, and 15 met the compliance target of 1.2-log but did not achieve the operational target of 1.32-log. Test 14 achieved 1.1-log removal compared to the 1.2-log compliance target. Tests 14 and 15 had identical test conditions with reduced pH to 6.5 - 6.6 and a lower ST setpoint of 90,000s⁻¹. Test 15 resulted in measured 1,4-dioxane log reduction of 1.22-log compared to Test 4 log reduction of 1.10-log. This relatively minor discrepancy is likely due to analytical uncertainty as the range of log removal calculations from both sets of analytical data (i.e., replicates from Tests 14 and 15) is from 1.0 to 1.4.

Overall, the UV-AOP system achieved the system performance requirements, meeting the 1,4-dioxane compliance log removal setpoint and PLC-predicted log removal for all tests under design conditions with a 2.4-log removal target, ST of 130,000 s⁻¹, UVT greater than 96 percent, and flow ranging from 1,000 to 2,000 gpm for all flow blends.

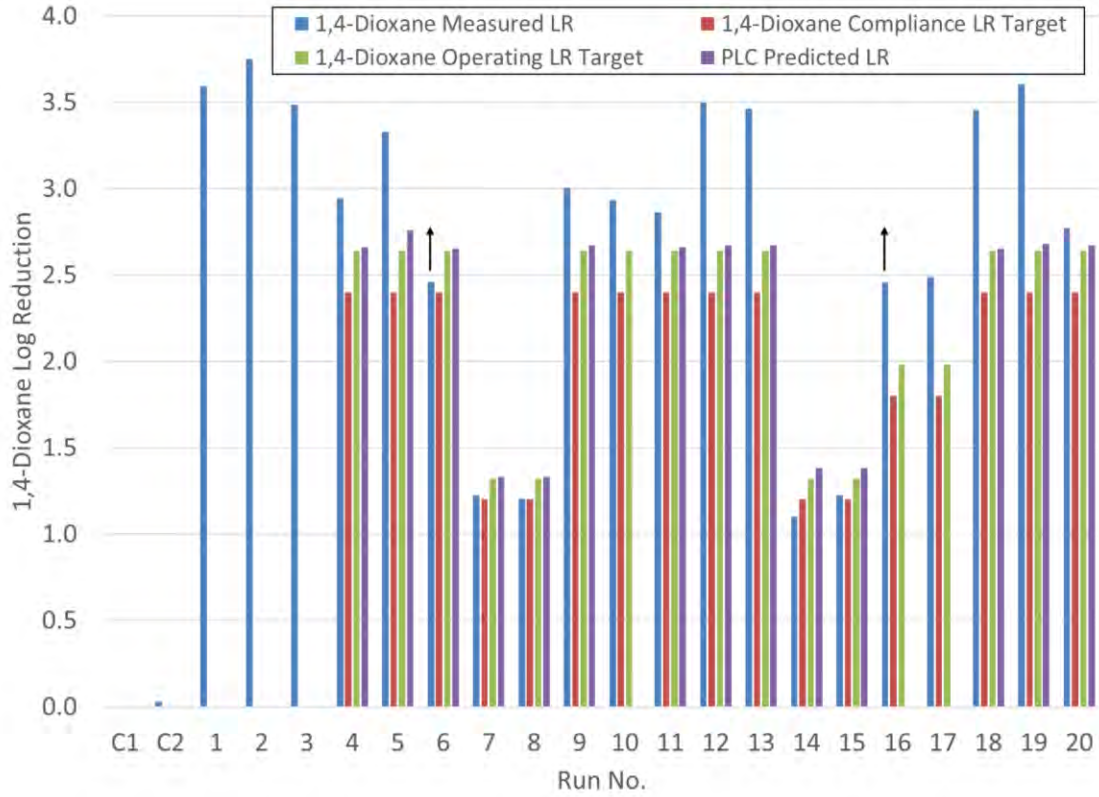


Figure 2-4. UV-AOP performance Test 1,4-dioxane treatment results

Figure copied from Trojan UV-AOP Performance Test Report.

Table 2-9. UV-AOP Performance Test 1,4-Dioxane Treatment Performance

No	Test ID	1,4-Dioxane Log Removal (log)			UV Feed Grab Sample Concentration (µg/L)			UV Effluent Grab Sample Concentration (µg/L)			Average Log Reduction
		Compliance Setpoint	Operating Setpoint ^a	PLC Predicted	Replicate 1	Replicate 2	RSD	Replicate 1	Replicate 2	RSD	
C1	UV-PTC1	Manual ^b	Manual ^b	Manual ^b	27	19	25	23	28	14	0.00
C2	UV-PTC2	Manual ^b	Manual ^b	Manual ^b	23	24	3.0	22	22	0.0	0.03
1	UV-PT1	Manual ^b	Manual ^b	Manual ^b	340	260	19	0.073	0.08	6.0	3.59
2	UV-PT2	Manual ^b	Manual ^b	Manual ^b	280	280	0.0	0.057 J	0.043 J	20	3.75
3	UV-PT3	Manual ^b	Manual ^b	Manual ^b	290	300	2.0	0.12	0.073	34	3.49
4	UV-PT4	2.4	2.64	2.66	330	340	2.0	0.46	0.300	30	2.95
5	UV-PT5	2.4	2.64	2.76	290	240	13	0.14	0.11	17	3.33
6	UV-PT6	2.4	2.64	2.65	370	370	0.0	0.37	2.2 ^c	101 ^c	2.46 (3.00) ^c
7	UV-PT7	1.2	1.32	1.33	24	28	11	1.6	1.5	5.0	1.22
8	UV-PT8	1.2	1.32	1.33	26	25	3.0	1.7	1.5	9.0	1.20
9	UV-PT9	2.4	2.64	2.67	350	320	6.0	0.3	0.36	13	3.01
10	UV-PT10	2.4	2.64	Manual ^b	120	120	0	0.16	0.12	20	2.93
11	UV-PT11	2.4	2.60	2.66	150	120	16	0.17	0.2	11	2.86
12	UV-PT12	2.4	2.60	2.67	190	160	12	0.052 J	0.06 J	10	3.49
13	UV-PT13	2.4	2.60	2.67	160	160	0	0.061 J	0.049 J	15	3.46
14	UV-PT14	1.2	1.32	1.38	30	29	2	2.5	2.2	9.0	1.10 ^d
15	UV-PT15	1.2	1.32	1.38	27	25	5	1.9	1.2	32	1.22
16	UV-PT16	1.8	1.98	Not Recorded ^e	390	390	0	2.4 ^c	0.32	108 ^c	2.46 (3.08) ^c
17	UV-PT17	1.8	1.98	Not Recorded ^e	85	90	4	0.32	0.25	17	2.49
18	UV-PT18	2.4	2.60	2.65	380	470	15	0.14	0.16	9	3.45
19	UV-PT19	2.4	2.60	2.68	330	360	6	0.095	0.076	16	3.61
20	UV-PT20	2.4	2.60	2.67	210	190	7	0.34	0.34	0	2.77

a. Operational setpoint was set 10% greater than the compliance log removal setpoint.

b. In manual operation mode, the UV control system does not provide a predicted log removal value.

c. Suspected anomalous analytical replicate result shown by the high relative standard deviation. Expected true log removal value is shown in parenthesis.

d. Average 1,4-dioxane log removal was below compliance log removal setpoint.

e. PLC predicted removal was inadvertently not recorded during sample collection.

Reported qualifier "J" indicates the measured concentration was below the MRL.



PCE Log Removal Treatment Performance

PCE was analyzed in single samples at the UV influent and effluent sample locations with approximately 10 percent of the tests (i.e., Tests 4 and 8) also collecting duplicate samples. Table 2-10 summarizes measured PCE concentrations and calculated RSD between the duplicate samples. Unlike 1,4-dioxane, PCE was not spiked during UV-AOP performance testing, which resulted in non-detect ($< 0.18 \mu\text{g/L}$) values in the UV effluent sample for 16 of the 22 tests. Calculated log removals for non-detect tests were calculated to the analytical method minimum detection limit of $0.18 \mu\text{g/L}$. It is noteworthy that PCE is removed through direct photolysis, thus PCE removal was observed for control condition 2 (Test C2), which operated with UV exposure without H_2O_2 dosing.

Comparison of PCE-measured log removals and the UV system compliance, operational, and predicted log removal values are illustrated in Figure 2-5. The dark blue bars represent the measured PCE log removals, with arrows above the bars indicating tests with measured log removals that would be higher due to the UV effluent sample being below the MDL. The compliance and operating log removal targets are shown in red and green bars, respectively. The PLC-predicted log removals are shown in the purple bars. The PLC-predicted PCE removal is typically equivalent to or slightly above the operational log removal setpoint; however, because multiple contaminant log removal treatment setpoints are implemented (e.g., 1,4-dioxane, PCE, and TCE) several test conditions had significantly higher PLC-predicted PCE log removals, due to the 1,4-dioxane operational setpoint controlling UV-AOP treatment. This resulted in the PLC-predicted PCE log removal being significantly higher than required to meet the PCE operational setpoint (as shown in Tests 9, 11, 12, 13).

As shown in Table 2-10 and Figure 2-5, it cannot be definitively concluded that the measured PCE log removal values exceeded the target and predicted values because most tests produced UV effluent PCE concentrations below the minimum detection limit. During confirmation of the UV-AOP Performance Test Plan, Trojan prepared a document titled "*Rationale for Proposing 1,4-Dioxane Removal Yield as an Indicator for Tetrachloroethene (PCE) and Trichloroethene (TCE) Removal Efficiency from Groundwater with the UV/ H_2O_2 AOP at Water Treatment Facilities.*" This document concluded that the log removal ratio for 1,4-dioxane:PCE:TCE would be 1.00:1.00:1.22 when treating the Olympic AWTF design water quality (i.e., ST of $130,000 \text{ s}^{-1}$). Using the established log removal ratios, predicted PCE log removal based on measured 1,4-dioxane log removals are shown in Figure 2-6 represented as light blue bars. These predicted values demonstrate the anticipated PCE log removals if sufficient UV influent PCE concentrations were present (and therefore, sufficient effluent PCE concentrations were subsequently present).

In runs where the PCE concentrations were NOT sufficient, the predicted PCE log removal exceeds the operating setpoint and therefore are predicted to accomplish the target log removal. In one test (Test 10) that did not meet target, the measured effluent PCE concentration was above the MDL and below the MRL and resulted in a measured log removal of 2.03 versus the compliance target of 2.3 log removal; however, it should be noted that analytical data that is below the MRL has a greater associated uncertainty. Further, inconsistencies between Test 10 results and others (e.g., Test 11, which was operated at conditions that should have resulted in a lower treatment but resulted in higher treatment levels than Test 10) lead the team to conclude that the Test 10 PCE result is anomalous. Also, Tests 7, 8, 14, and 15 did produce effluent PCE concentrations greater than the MDL, and the resulting log removals were less than the predicted log removals. For those four tests, each of which targeted a lower PCE log removal target of 1.15, two of the four tests met or exceeded the compliance target, while Tests 14 and 15 achieved 92 percent of the compliance target log removal (i.e., 1.06 vs 1.15). The predicted PCE log removal based on the measured 1,4-dioxane log removals are also lower than the operating target for all four runs and lower than the compliance

target for Test 14. However, the agreement between the measured and predicted log removals for these runs suggests that the PCE log removal predictions based on the measured 1,4-dioxane log removals are sound and that an increase in the log removal target (to the general compliance level of 2.3 log removal) will result in successful ongoing operation related to PCE removal.

Overall, the UV-AOP system produced non-detect (< 0.18 µg/L) PCE concentrations in the UV effluent for all tests under design conditions with 2.3-log removal target, ST 130,000 s⁻¹, UVT greater than 96 percent, and flow ranging from 1,000 to 2,000 gpm for all flow blends. For these test conditions, the predicted PCE log removal based on measured 1,4-dioxane log removals exceeded the compliance and operational PCE log removal setpoints.

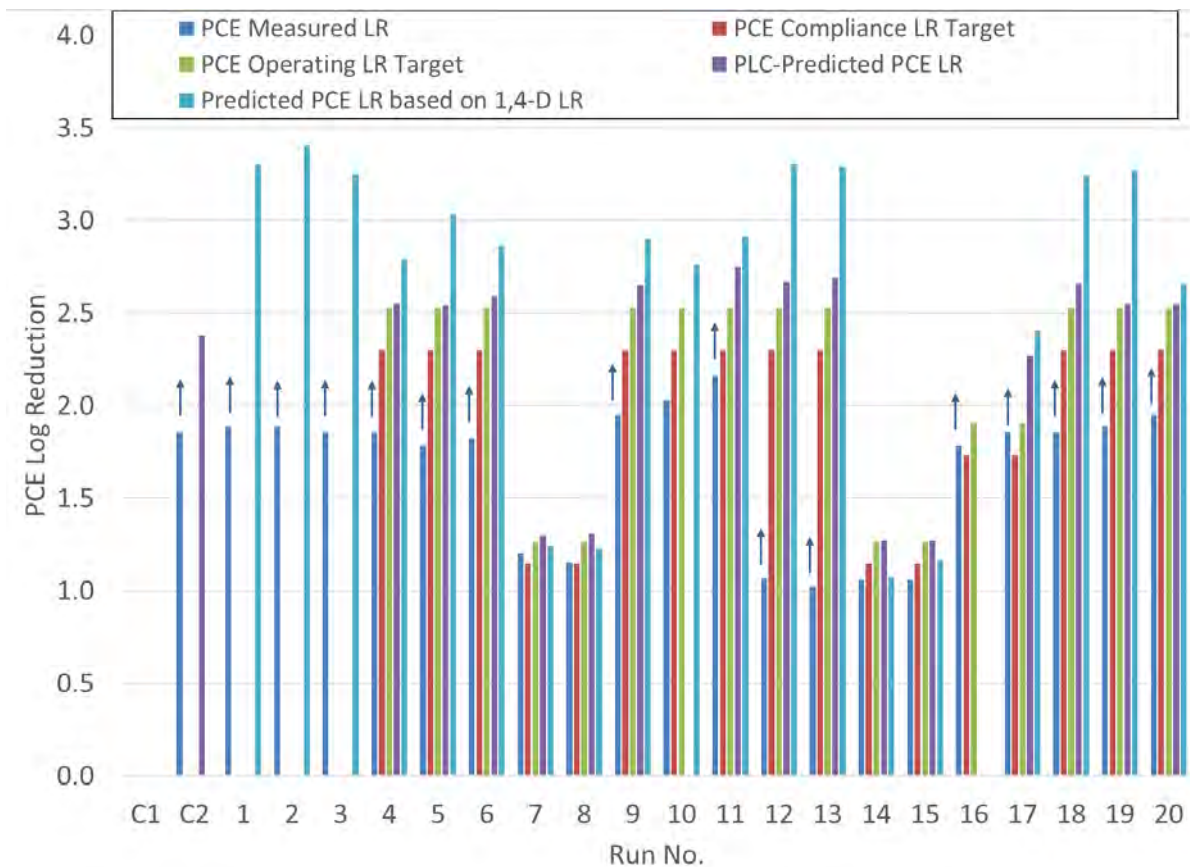


Figure 2-5. UV-AOP performance test PCE treatment results

Figure copied from the Trojan UV-AOP Performance Test Report

Table 2-10. UV-AOP Performance Test PCE Treatment Performance

No	Test ID	PCE Log Removal (log)			UV Feed Grab Sample Concentration (µg/L)		UV Effluent Grab Sample Concentration (µg/L)		Average Log Reduction
		Compliance Setpoint	Operating Setpoint ^a	PLC Predicted	Replicate 1	Replicate 2	Replicate 1	Replicate 2	
C1	UV-PTC1	Manual ^b	Manual ^b	Manual ^b	14	--	14	--	0.00
C2	UV-PTC2	Manual ^b	Manual ^b	Manual ^b	13	--	BDL ^c	--	> 1.9 ^c
1	UV-PT1	Manual ^b	Manual ^b	Manual ^b	14	--	BDL	--	> 1.9 ^c
2	UV-PT2	Manual ^b	Manual ^b	Manual ^b	14	--	BDL	--	> 1.9 ^c
3	UV-PT3	Manual ^b	Manual ^b	Manual ^b	13	--	BDL	--	> 1.9 ^c
4	UV-PT4	2.3	2.53	2.55	13	--	BDL	BDL	> 1.9 ^c
5	UV-PT5	2.3	2.53	2.54	11	--	BDL	--	> 1.9 ^c
6	UV-PT6	2.3	2.53	2.59	12	--	BDL	--	> 1.9 ^c
7	UV-PT7	1.15	1.27	1.30	14	--	0.88	--	1.20
8	UV-PT8	1.15	1.27	1.31	14	15	1.1	0.94	1.15
9	UV-PT9	2.3	2.53	2.65	16	--	BDL	--	> 1.9 ^c
10	UV-PT10	2.3	2.53	Manual ^b	28	--	0.26 J	--	2.03 ^e
11	UV-PT11	2.3	2.50	2.75	26	--	BDL	--	> 2.2 ^c
12	UV-PT12	2.3	2.50	2.67	2.1	--	BDL	--	> 1.9 ^c
13	UV-PT13	2.3	2.50	2.69	1.9	--	BDL	--	> 1.9 ^c
14	UV-PT14	1.15	1.27	1.27	15	--	1.3	--	1.06 ^e
15	UV-PT15	1.15	1.27	1.27	15	--	1.3	--	1.06 ^e
16	UV-PT16	1.73	1.90	Not Recorded ^d	11	--	BDL	--	> 1.9 ^c
17	UV-PT17	1.73	1.90	2.27	13	--	BDL	--	> 1.9 ^c
18	UV-PT18	2.3	2.50	2.66	13	--	BDL	--	> 1.9 ^c
19	UV-PT19	2.3	2.50	2.55	14	--	BDL	--	> 1.9 ^c
20	UV-PT20	2.3	2.50	2.55	16	--	BDL	--	> 1.9 ^c

a. Operational setpoint was 10% greater than the compliance log removal setpoint.

b. In manual operation mode the UV control system does not provide a predicted log removal value.

c. Sample was below the PCE analytical MDL of 0.18 µg/L. Average log reduction were limited to the MDL.

d. PLC predicted removal was inadvertently not recorded during sample collection.

e. Average measurable PCE log removal was below the compliance log removal setpoint.

Reported qualifier "J" indicates the measured concentration was below the method reporting limit of 0.5 ug/L but above the method detection limit of 0.18 ug/L.



TCE Log Removal Treatment Performance

TCE was analyzed in single samples at the UV influent and effluent sample locations with approximately 10 percent of the tests (i.e., Tests 4 and 8) also collecting duplicate samples. Table 2-11 summarizes measured TCE concentrations and calculated RSD between the duplicate samples. Similar to PCE, TCE was not spiked during UV-AOP performance testing, which resulted in non-detect (< 0.18 µg/L) values in the UV effluent sample for 16 of the 22 tests. The concentration of TCE was above the values used in the initial and contingency design estimated in the Step 4 report (34 and 71 µg/L for the highest well, SM-4, respectively) in some test cases; however higher (than design) removal was demonstrated during the UV-AOP performance test and complete removal was achieved during the 7-day acceptance test, as described in Section 4.5. Calculated log removals for non-detect tests were calculated to the analytical method minimum detection limit of 0.18 µg/L. It is noteworthy that TCE can be removed through direct photolysis, thus some TCE removal was observed for control condition 2 (Test C2) operating with UV exposure without H₂O₂ dosing.

Comparison of TCE-measured log removals and the UV system's compliance, operational, and predicted log removal values are illustrated in Figure 2-6. The dark blue bars represent the measured TCE log removals, with arrows above the bars to indicate tests with measured log removals that would be higher, due to UV effluent sample measurement being below the minimum detection limit. The compliance and operating log removal targets are shown in red and green bars, respectively. The PLC-predicted log removals are shown in the purple bars. The PLC-predicted TCE removals are significantly higher than the operational log removal setpoint due to the UV system being controlled to achieve 1,4-dioxane log removal setpoints.

Tests 7, 8, 14, and 15 measured TCE concentrations above the minimum detection limit in the UV effluent samples and were able to demonstrate log removals exceeding compliance and PLC-predicted log removal values. 16 of 22 test conditions produced UV effluent TCE concentrations below the minimum detection limit of 0.18 µg/L, which limits the calculation of log removals. Nevertheless, given the higher ambient concentration of TCE in the blended source water, most of the test conditions were able to demonstrate achievement of the compliance log removal setpoint. Only tests 10 and 11 were not able to demonstrate the compliance log removal target was met because the influent TCE concentration was too low. Using the established log removal ratios 1.00:1.22 for 1,4-dioxane:TCE, predicted TCE log removal based on measured 1,4-dioxane log removals are shown in Figure 2-6 represented as light blue bars. These predicted values demonstrate that the anticipated TCE log removals would exceed target values if sufficient UV influent PCE concentrations were present.

Overall, the UV-AOP system achieved the TCE compliance log removal target under all test conditions.

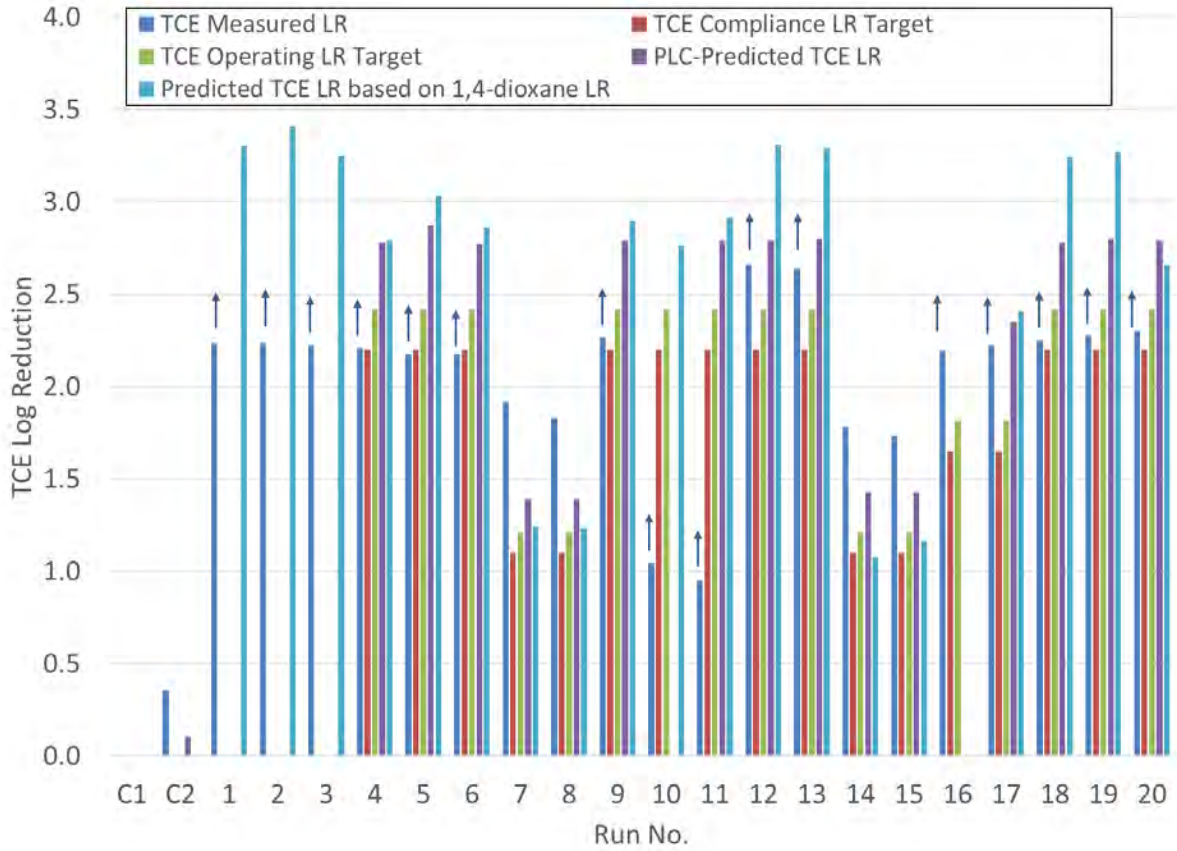


Figure 2-6. UV-AOP performance test TCE treatment results
 Figure copied from the Trojan UV-AOP Performance Test Report



Table 2-11. UV-AOP Performance Test TCE Treatment Performance

No	Test ID	TCE Log Removal (log)			UV Feed Grab Sample Concentration (µg/L)		UV Effluent Grab Sample Concentration (µg/L)		Average Log Reduction
		Compliance Setpoint	Operating Setpoint ^a	PLC Predicted	Replicate 1	Replicate 2	Replicate 1	Replicate 2	
C1	UV-PTC1	Manual ^b	Manual ^b	Manual ^b	32	--	32	--	0.00
C2	UV-PTC2	Manual ^b	Manual ^b	Manual ^b	34	--	15	--	0.36
1	UV-PT1	Manual ^b	Manual ^b	Manual ^b	31	--	BDL	--	> 2.2 ^c
2	UV-PT2	Manual ^b	Manual ^b	Manual ^b	31	--	BDL	--	> 2.2 ^c
3	UV-PT3	Manual ^b	Manual ^b	Manual ^b	30	--	BDL	--	> 2.2 ^c
4	UV-PT4	2.2	2.42	2.78	29	--	BDL	BDL	> 2.2 ^c
5	UV-PT5	2.2	2.42	2.87	27	--	BDL	--	> 2.2 ^c
6	UV-PT6	2.2	2.42	2.77	27	--	BDL	--	> 2.2 ^c
7	UV-PT7	1.1	1.21	1.39	37	--	0.45 J	--	1.91
8	UV-PT8	1.1	1.21	1.39	35	35	0.52	0.51	1.83
9	UV-PT9	2.2	2.42	2.79	33	--	BDL	--	> 2.3 ^c
10	UV-PT10	2.2	2.42	Manual ^b	2	--	BDL	--	> 1.0
11	UV-PT11	2.2	2.4	2.79	1.6	--	BDL	--	> 0.9
12	UV-PT12	2.2	2.4	2.79	82	--	BDL	--	> 2.7 ^c
13	UV-PT13	2.2	2.4	2.80	78	--	BDL	--	> 2.6 ^c
14	UV-PT14	1.1	1.21	1.43	37	--	0.61	--	1.78
15	UV-PT15	1.1	1.21	1.43	35	--	0.65	--	1.73
16	UV-PT16	1.65	1.82	Not Recorded ^d	28	--	BDL	--	> 2.2 ^c
17	UV-PT17	1.65	1.82	2.35	30	--	BDL	--	> 2.2 ^c
18	UV-PT18	2.2	2.4	2.78	32	--	BDL	--	> 2.2 ^c
19	UV-PT19	2.2	2.4	2.8	34	--	BDL	--	> 2.3
20	UV-PT20	2.2	2.4	2.79	36	--	BDL	--	> 2.3

a. Operational setpoint was 10% greater than the compliance log removal setpoint.

b. In manual operation mode, the UV control system does not provide a predicted log removal value.

c. Sample was below the TCE analytical MDL of 0.18 µg/L. Average log reduction was limited to the MDL.

d. PLC-predicted removal was inadvertently not recorded during sample collection.

Reported qualifier "J" indicates the measured concentration was below the MRL.



2.5.3 Recommendations for UV-AOP Operation

Based on the testing results, it is recommended that the City uses the Trojan UV “Dynamically Adjusted Control Algorithm” approach with a variable lamp power and hydrogen peroxide dose. Compliance setpoints of 2.4-log removal for 1,4-dioxane, 2.2-log removal for TCE, and 2.3-log removal for PCE should be used with design scavenging term of $130,000 \text{ s}^{-1}$ when operating at ambient influent pH. It is recommended that the system operates with an operational log removal setpoint of 10% greater than the compliance log removal setpoint (i.e., 1.1 safety factor).

The City would like to retain flexibility in the permit to modify the operating scavenging term in the future. However, the City does not plan to request the ability to operate with a reduced scavenging term at a depressed influent pH until one year or more of operation at the above recommended ambient conditions following permit amendment approval. At that time, discussion with DDW as to required data collection to demonstrate maintenance of adequate treatment at the alternative operating conditions would be discussed with DDW.

2.5.4 Documentation of System or Equipment Failures or Outages

During Test 10, a chemical feed line for the H_2O_2 system malfunctioned, which caused the shutdown of the UV-AOP system. The line was replaced, and sampling of Test 10 was conducted in manual mode due to limited daily operation time. All following UV-AOP tests were conducted in automatic mode after the PLC system was rebooted.

2.6 GAC Performance Test

The GAC performance test was conducted concurrently with the UV-AOP performance test to confirm residual H_2O_2 was quenched to non-detect levels ($< 0.2 \text{ mg/L}$). GAC performance test conditions followed conditions established for the UV-AOP performance test detailed in Section 2.5.

2.6.1 Operational and Performance Results

A summary of the GAC performance test operational and water quality results is provided in Table 2-12. Flow was split between GAC Trains 1 and 2 for test conditions at 1,500 to 2,000 gpm, which resulted in hydraulic loading rates of 6.6 to 8.8 gpm/ft². For low flow conditions at 1,000 gpm, Train 1 treated the full flow with an approximate hydraulic loading rate of 8.8 gpm/ft². Headloss through the GAC lead vessel was 3 psi or less for all test conditions. Grab samples were collected along the lead vessel media bed for each test condition and monitored for H_2O_2 residual. Additionally, grab samples were collected at the lead and lag effluent sample locations for Train 1 and sent to an external analytical laboratory (Weck) for analysis of COPCs. All four trains are identical in design and GAC age; thus, operational and water quality results from Train 1 are representative of Trains 2, 3, and 4.

GAC influent H_2O_2 residual ranged from 0 to 40.5 mg/L across the GAC performance test conditions. H_2O_2 residuals were quenched to 3 mg/L or less by the first GAC vessel sample port (top of the media bed) and were non-detect by the third GAC vessel sample port for all test conditions (Table 2-12). COPCs were non-detect in the GAC influent except for the following: 1,4-dioxane, 1,2,3-TCP, carbon tetrachloride, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and PFOA. 1,4-dioxane was detected below the lab MDL ($1 \mu\text{g/L}$) for test conditions 11 and 20 in the lead GAC effluent sample location. All other GAC lead and lag effluent samples were non-detect for all COPCs across the test conditions (Table 2-13).

Overall, the GAC system met the water quality and design criteria providing H_2O_2 quenching to non-detect for all test conditions.



Table 2-12. GAC Performance Test Conditions

No.	Test ID	GAC Trains Flows (gpm)					Train Sampled for COPCs	H ₂ O ₂ Residual (mg/L)								Differential Pressure (psi)			
		Train 1	Train 2	Train 3	Train 4	Total		GAC Feed	Lead (Train 1/Train 2)				Lag (Train 1/Train 2)				GAC Effluent	Train 1	
									Port 1	Port 2	Port 3	Port 4	Port 1	Port 2	Port 3	Port 4		Lead	Lag ^a
C1	PT-GACC1	945	1,045	-	-	1,990	1	40.5	3/3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
C2	PT-GACC2	940	1,045	-	-	1,985	1	0.0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
1	PT-GAC1	945	1,040	-	-	1,985	1	23.3	3/3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
2	PT-GAC2	945	1,040	-	-	1,985	1	23.0	3/3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
3	PT-GAC3	942	1,040	-	-	1,982	1	21.3	3/3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
4	PT-GAC4	975	992	-	-	1,967	1	18.2	2/3	1/1	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
5	PT-GAC5	976	992	-	-	1,968	1	23.0	2/3	1/0	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
6	PT-GAC6	986	987	-	-	1,973	1	17.0	2/3	1/0.5	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
7	PT-GAC7	970	985	-	-	1,955	1	18.7	2/3	0.5/1	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
8	PT-GAC8	975	981	-	-	1,956	1	16.8	2/3	1/0.5	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
9	PT-GAC9	720	717	-	-	1,437	1	14.9	2/3	0.5/0	0/0	0/0	0/0	0/0	0/0	0/0	0.0	1	--
10	PT-GAC10	962	0	-	-	962	1	15.7	2/-	0.5/-	0/-	0/-	0/-	0/-	0/-	0/-	0.0	3	--
11	PT-GAC11	978	0	-	-	978	1	12.0	2/-	0.5/-	0/-	0/-	0/-	0/-	0/-	0/-	0.0	3	--
12	PT-GAC12	863	0	-	-	863	1	13.2	3/-	0/-	0/-	0/-	0/-	0/-	0/-	0/-	0.0	3	--
13	PT-GAC13	865	0	-	-	865	1	12.0	3/-	0/-	0/-	0/-	0/-	0/-	0/-	0/-	0.0	3	--
14	PT-GAC14	983	977	-	-	1,960	1	19.7	2/3	1/0.5	0/0	0/0	0/0	0/0	0/0	0/0	0.0	3	--
15	PT-GAC15	980	978	-	-	1,958	1	19.2	2/3	0.5/0.5	0/0	0/0	0/0	0/0	0/0	0/0	0.0	3	--
16	PT-GAC16	986	985	-	-	1,971	1	15.8	1/3	0/0.5	0/0	0/0	0/0	0/0	0/0	0/0	0.0	3	--
17	PT-GAC17	988	983	-	-	1,971	1	14.2	2/3	1/0	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
18	PT-GAC18	984	973	-	-	1,957	1	14.9	2/3	0.5/1	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
19	PT-GAC19	981	979	-	-	1,960	1	18.7	2/3	1/1	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--
20	PT-GAC20	985	975	-	-	1,960	1	14.4	2/3	0.5/0.5	0/0	0/0	0/0	0/0	0/0	0/0	0.0	2	--

a. Temporary discharge to sewer line was installed post GAC, as per the Olympic AWTF Acceptance Test Plan. Lag pressure gauge was not representative of typical full-scale operation.



Table 2-13. Olympic AWTF GAC COPCs																		
No	Test ID	Train 1Flow (gpm)	1,4-dioxane (µg/L)		1,2,3-TCP (µg/L)		1,1-DCA (µg/L)		Carbon Tetrachloride (µg/L)		Cis-1,2-Dichloroethene (µg/L)		Tetrachloroethene (µg/L)		Trichloroethene (µg/L)		PFOA (ng/L)	
			GAC	Lead/Lag	GAC	Lead/Lag	GAC	Lead/Lag	GAC	Lead/Lag	GAC	Lead/Lag	GAC	Lead/Lag	GAC	Lead/Lag	GAC	Lead/Lag
			INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF	INF	EFF
C1	PT-GACC1	945	23	ND/ND	0.021	ND/ND	0.56	ND/ND	0.63	ND/ND	1.2	ND/ND	14	ND/ND	32	ND/ND	2.1	ND/ND
C2	PT-GACC2	940	22	ND/ND	0.022	ND/ND	0.69	ND/ND	0.7	ND/ND	0.85	ND/ND	ND	ND/ND	15	ND/ND	2.1	ND/ND
1	PT-GAC1	945	0.073	ND/ND	0.0099	ND/ND	0.33 J	ND/ND	0.48 J	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.1	ND/ND
2	PT-GAC2	945	0.057	ND/ND	0.011	ND/ND	ND	ND/ND	0.58	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.1	ND/ND
3	PT-GAC3	942	0.12	ND/ND	0.0092	ND/ND	ND	ND/ND	0.56	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.2	ND/ND
4	PT-GAC4	975	0.38	ND/ND	0.012	ND/ND	0.29 J	ND/ND	0.52	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.2	ND/ND
5	PT-GAC5	976	0.14	ND/ND	0.012	ND/ND	ND	ND/ND	0.49 J	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.2	ND/ND
6	PT-GAC6	986	0.37	ND/ND	0.010	ND/ND	ND	ND/ND	0.62	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.2	ND/ND
7	PT-GAC7	970	1.6	ND/ND	0.011	ND/ND	0.5	ND/ND	0.73	ND/ND	ND	ND/ND	0.88	ND/ND	0.45 J	ND/ND	2.5	ND/ND
8	PT-GAC8	975	1.6	ND/ND	0.017	ND/ND	0.48 J	ND/ND	0.65	ND/ND	ND	ND/ND	1.02	ND/ND	0.52	ND/ND	2.2	ND/ND
9	PT-GAC9	720	0.3	ND/ND	0.011	ND/ND	0.37 J	ND/ND	0.60	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.6	ND/ND
10	PT-GAC10	962	0.16	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	0.26 J	ND/ND	ND	ND/ND	4.3	ND/ND
11	PT-GAC11	978	0.17	0.035 J/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	4.2	ND/ND
12	PT-GAC12	863	0.052	ND/ND	0.019	ND/ND	0.68	ND/ND	1.2	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	0.75 J	ND/ND
13	PT-GAC13	865	0.061	ND/ND	0.019	ND/ND	0.69	ND/ND	1.3	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	0.77 J	ND/ND
14	PT-GAC14	983	2.5	ND/ND	0.015	ND/ND	0.5	ND/ND	0.58	ND/ND	ND	ND/ND	1.3	ND/ND	0.61	ND/ND	2.3	ND/ND
15	PT-GAC15	980	1.9	ND/ND	0.015	ND/ND	0.51	ND/ND	0.57	ND/ND	ND	ND/ND	1.3	ND/ND	0.65	ND/ND	2.8	ND/ND
16	PT-GAC16	986	2.4	ND/ND	0.014	ND/ND	0.4 J	ND/ND	0.5	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.2	ND/ND
17	PT-GAC17	988	0.32	ND/ND	0.013	ND/ND	0.43 J	ND/ND	0.47 J	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.2	ND/ND
18	PT-GAC18	984	0.14	ND/ND	0.010	ND/ND	0.38 J	ND/ND	0.58	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.7	ND/ND
19	PT-GAC19	981	0.095	ND/ND	0.0093	ND/ND	0.36 J	ND/ND	0.53	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.7	ND/ND
20	PT-GAC20	985	0.34	0.040 J/ND	0.011	ND/ND	0.39 J	ND/ND	0.57	ND/ND	ND	ND/ND	ND	ND/ND	ND	ND/ND	2.8	ND/ND

COPCs that were non-detect in the GAC feed, lead effluent, and lag effluent test include 1,1,2-Trichloroethane, 1,1-DCE, 1,2-DCA, benzene, MTBE, trans-1,2-Dichloroethene, vinyl chloride.



2.6.2 Documentation of System or Equipment Failures or Outages

Temporary discharge to the storm drain was installed post GAC, as per the Olympic AWTF Acceptance Test Plan. The lag pressure gauge was not representative of typical full-scale operation. No other GAC system or equipment failures or outages were observed during the Olympic AWTF Performance Test.

2.7 Deviation from Acceptance Test Plan

Table 2-14 provides a summary of deviations from the Olympic AWTF performance test.

Table 2-14. Deviations from the AWTF Performance Test Plan		
Item	Condition	Description
SM-4	All	Olympic well SM-4 was not in operation during the performance test period. Well blends according to the AWTF Performance Test Plan were adjusted based on available operational Olympic wells (i.e. SM-8 and SM-9). Confirmation of this deviation with DDW was received during the DDW meeting on August 9, 2023.
Hydrogen peroxide system malfunction	Test 10	The hydrogen peroxide system malfunctioned during test 10 causing manual shutdown of the UV-AOP system. The hydrogen peroxide system was fixed, and Test 10 was retested in manual mode simulating specified test conditions. Peroxide concentration was confirmed in the field.
GAC Train 1 and Train 2	All	GAC train 1 was in operation and was collected for COPCs for all test conditions. Flow was also passed through train 2 for test conditions with flow greater than 1,000 gpm. GAC trains are identical; thus, results from train 1 are representative of all other GAC trains.

2.8 Operational and Treatment Performance Compliance

The Olympic AWTF achieved all the operational and treatment performance criteria during the performance test. A summary of the performance criteria and compliance is provided in Table 2-15.

Table 2-15. Olympic AWTF Operational and Treatment Performance Compliance

Test	Parameter	Criteria	Compliance
Greensand performance test	Iron	≤ 0.3 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)	Achieved ^a
	Manganese	≤ 0.05 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)	Achieved ^a
UV-AOP performance test	1,4-dioxane	≥ 2.4-log removal	Achieved for all design conditions ^b
	TCE	≥ 2.2-log removal	Achieved for all conditions
	PCE	≥ 2.3-log removal	Achieved for all design conditions ^c
	Total flow	2,000 gpm	Achieved
	UVT	≥ 96%	Achieved
	UV system power	329 kW	Final Trojan report pending ^d
	H ₂ O ₂ Dose	Maximum H ₂ O ₂ dose of 40 mg/L	Achieved
GAC performance test	H ₂ O ₂	Quench residual H ₂ O ₂ to non-detect	Achieved
	COPCs	Document treatment performance	Documented
	Loading rate	≤ 5.9 gpm/ft ²	Achieved
	EBCT	≥ 5 minutes	Achieved
	Headloss	≤ 10-inch w.c./ft bed depth	Achieved

- a. The City's Fe and Mn combined target concentration of ≤ 0.06 mg/L was achieved for all conditions except C2. Lower concentrations are expected when well sodium hypochlorite chemical feed systems are operational.
- b. Test 14 did not achieve the 1,4-dioxane log removal compliance setpoint of 1.2-log. This test condition was set below the design criteria log removal setpoint of 2.4-log.
- c. Tests 14 and 15 did not achieve the PCE log removal compliance setpoint of 1.15-log. This test condition was set below the design criteria log removal setpoint of 2.3-log. Test 10 was identified as an anomalous result.
- d. Design log removal goals were achieved at design operating conditions. Final Trojan power measurements pending.

Section 3

Flow Reversal Reverse Osmosis Performance Test Results

This section presents the results of the FRRO Performance Test.

3.1 Overview of FRRO Performance Test

The FRRO performance test was conducted on February 6, 2024 and February 7, 2024 to confirm the RO system satisfies operational and treatment performance criteria summarized in Table 3-1. Each RO skid was operated in flow reversal mode with a feed flow of 1,900 gpm and monitored for operational and water quality performance. Operating setpoints were determined during the optimization process conducted prior to the start of the FRRO performance test, where the recovery rate was progressively increased from 82 percent to 90 percent. The planned FRRO performance test matrix presented in the Arcadia WTP Acceptance Test Plan is provided in Table 3-2.

Table 3-1. FRRO Performance Test Performance Criteria

Parameter	Criteria
System Recovery	90%
Feed Flow Range, per Train	1,650 to 1,900 gpm
Feed Water pH	≥ 6.6
Antiscalant Dose	2.4 - 4.5 mg/L (Avista Vitec-4000) or 0.8 to 1.2 mg/L (AWC A-119)
COPCs and Background Water Quality	Document treatment performance

Table 3-2. Test Plan FRRO Performance Test Matrix

Day	No.	Test ID	RO Feed Flow Rate (gpm)	Train in Operation	Target Percent Recovery	Purpose
1	1	PT-R01	1,900 per train	1	90%	Confirm design recovery at maximum RO feed flow rate
	2	PT-R02	1,900 per train	2	90%	
2	3	PT-R03	1,900 per train	3	90%	Confirm design recovery at maximum RO feed flow rate
	4	PT-R04	1,900 per train	4	90%	

Analytical results for FRRO performance test are reported to the analytical MDL to provide more precise quantification of treatment performance for each treatment process. Results presented may be below the analytical MRL shown with a “J” qualifier, and below DDW DRL, as reported in the 7-day acceptance test (Section 4).

3.2 FRRO Performance Test Results

The test conditions executed during the FRRO performance test are presented in Table 3-3. Test conditions were operated at steady state, and samples were collected at least 1 hour after initiation of new test conditions. RO Train 1 retrofit is still under construction and consequently was not available for the entirety of the FRRO Performance Test and 7-day Acceptance Test.

Day	No.	Test ID	RO Feed Flow Rate (gpm)	Train in Operation	Target Percent Recovery	Note
-	1	PT-R01	1,900 per train	1	90%	Train 1 not in operation during performance test
1	2	PT-R02	1,900 per train	2	90%	Operated for 24-hours
	4	PT-R04	1,900 per train	4	88%	Operated for 1.1-hours; shut down after collection of water quality samples triggered by individual stage high differential pressure; actual recovery was 88 percent
2	3	PT-R03	1,900 per train	3	90%	Operated for 1.7-hours; shut down after collection of water quality samples triggered by individual stage high differential pressure

The FRRO performance test period was used to verify the functionality of the RO system's mechanical equipment, programming, and controls. Due to an individual stage high differential pressure when rotating blocks, a more conservative (88 percent maximum) recovery was chosen for Train 4 water quality sampling.

3.2.1 Operational Monitoring

A summary of the FRRO performance test operational results is provided in Table 3-4. RO Train 2 was operated for 24 hours with an average feed flow rate of 1,899 gpm and operated at 90 percent recovery. Train 3 was operated for 124 minutes at 90 percent recovery, and Train 4 was operated for 68 minutes at 88 percent recovery. FRRO performance test flows and percent recovery for Trains 2, 3, and 4 are shown in Figures 3-1, 3-2, and 3-3, respectively.

Table 3-4. FRR0 Performance Test Operational Monitoring

Parameter	RO Train 2	RO Train 3	RO Train 4
Test ID	PT-R02	PT-R03	PT-R04
Start of Testing	2/6/2024 9:50	2/7/2024 12:30	2/6/2024 11:40
End of Testing	2/7/2024 9:50	2/7/2024 14:34	2/6/2024 12:48
Feed Flow Rate (gpm)	1,899	1,901	1,900
Permeate Flow Rate (gpm)	1,709	1,711	1,672
RO Bypass Setpoint (%)	15	15	15
Concentrate Flow Rate (gpm)	190	190	228
Percent Recovery (%)	90%	90%	88%
Membrane Stage 1 Flux (gfd)	13.3	13.4	12.6
Membrane Stage 2 Flux (gfd)	12.5	12.5	12.5
Membrane Stage 3 Flux (gfd)	10.6	10.7	11.8
Normalized Feed Pressure (psi) ^b	125	126	120
Normalized Permeate Flow Rate (gpm) ^b	1,016	1,634	1,553
Normalized Specific Flux (gfd/psi) ^b	0.12	0.12	0.12
Normalized Salt Passage (%) ^b	0.82%	1.01% ^c	0.63%
Antiscalant Dose (mg/L)	3.5 to 4.5 ^a	4.5	4.5

a. Antiscalant dose of Avista Vitec-4000 was increased from 3.5 to 4.5 mg/L per antiscalant chemical vendor recommendation on 2/7/2024 at 7:30 a.m. to address scaling issues observed in the brine line.

b. Normalized calculations were performed using TorayTrak, a publicly available normalization software for Toray RO membranes. <https://www.water.toray/knowledge/tool/trak/>. Note that the baseline used is the average of the first four data points following initial startup for each respective RO Train at the corresponding recovery.

c. Permeate conductivity was 52-55 $\mu\text{S}/\text{cm}$ throughout the 2 hours that it was online. The conductivity meter was likely out of calibration that day. A conductivity profile was taken the previous day and the measured field conductivity was 37.5 and the field meter read 55.4 $\mu\text{S}/\text{cm}$.

gfd = gallons per square foot per day

Antiscalant dose and process pH optimization is currently being conducted due to presence of scale in the concentrate lines. Scale mitigation measures currently being investigated include increase of antiscalant dose as described in Table 3-4, optimization of flush sequences, concentrate valve adjustments to reduce high pressure drop and evolution of carbon dioxide, and RO feed pH and antiscalant product and dosage modifications.

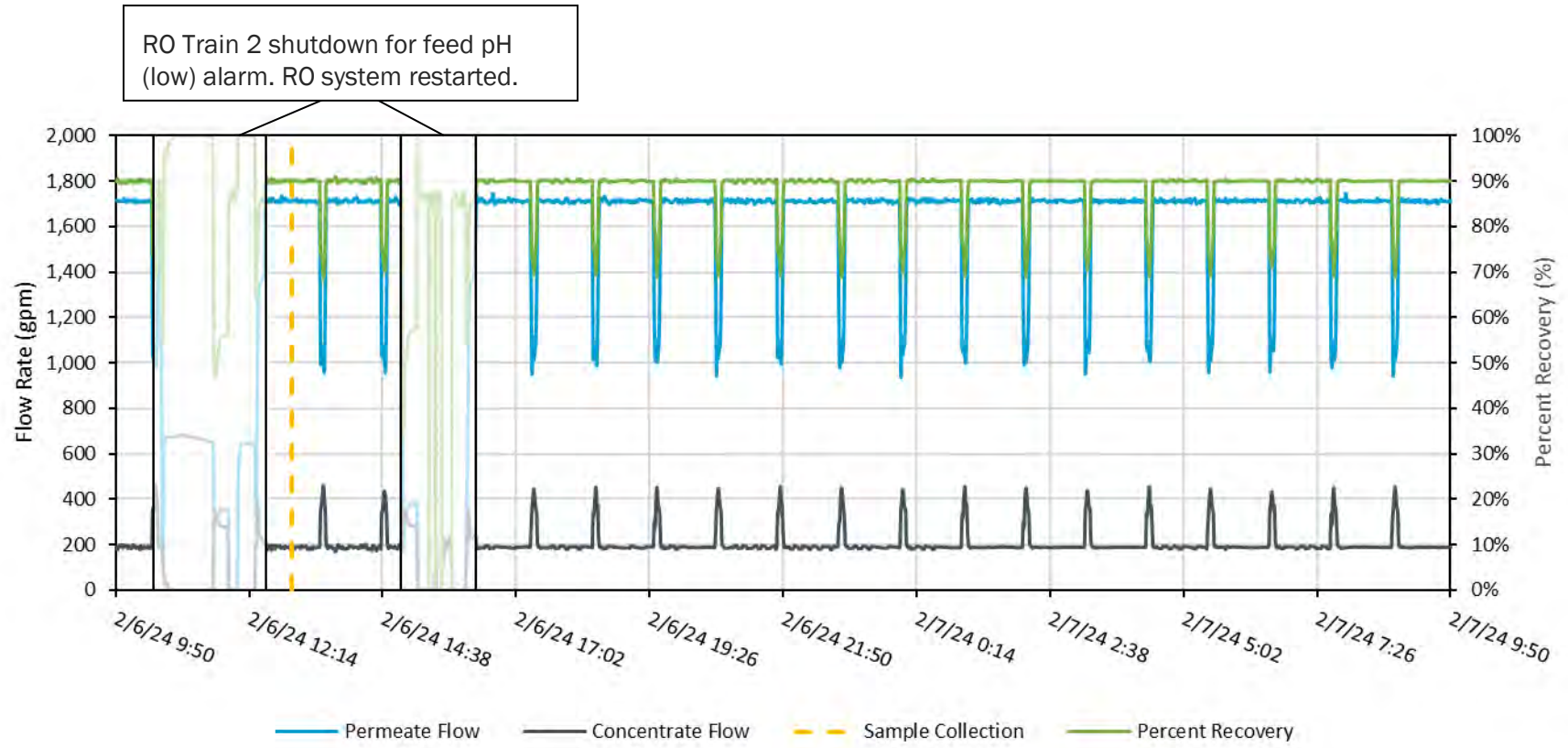


Figure 3-1. FRRO Performance test flows and percent recovery – Train 2



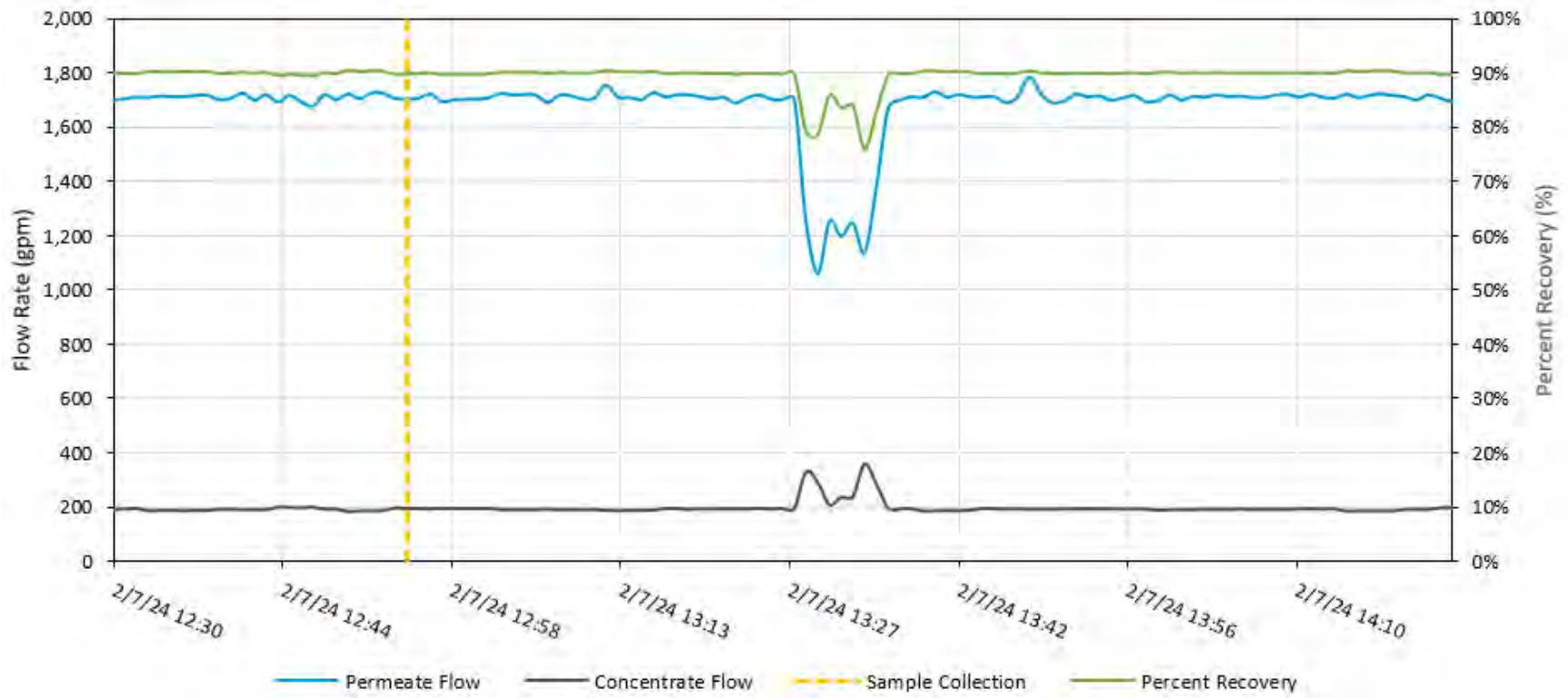


Figure 3-2. FRRO performance test flows and percent recovery – Train 3



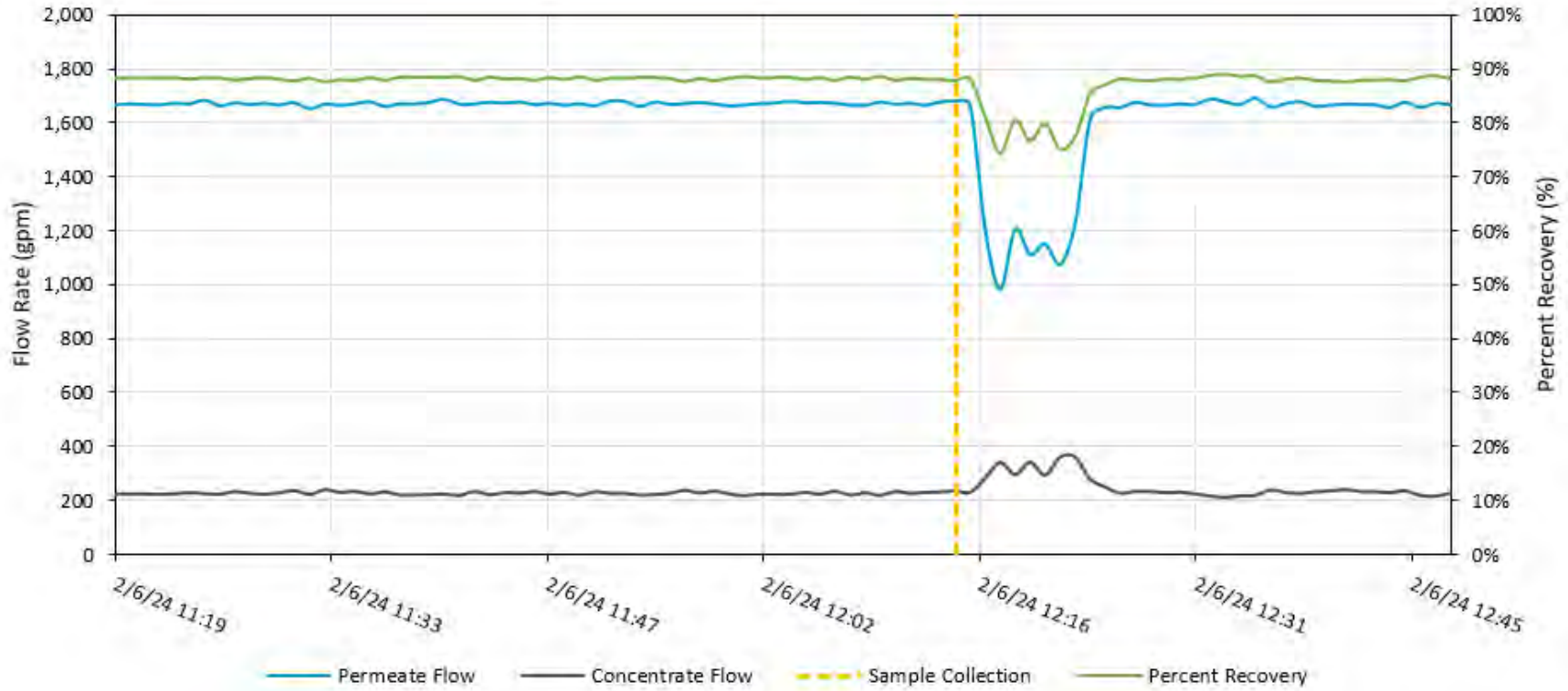


Figure 3-3. FRRO performance test flows and percent recovery – Train 4

3.2.2 Water Quality Monitoring

The FRRO performance test was conducted with blended water from the Charnock WTP and Olympic AWTF. The RO feed water quality was continuously monitored via online water quality monitors for conductivity, oxidation reduction potential (ORP), chloramine residual, turbidity, pH, and temperature. Time series plots for online RO feed water quality is presented in Figure 3-4, Figure 3-5, and Figure 3-6. On-site water quality samples were collected and analyzed using field meters to confirm treatment performance. Grab samples were also collected on the RO feed and RO permeate for each RO train and sent to an external laboratory (Weck) for analysis. A summary of water quality is provided in Table 3-5.

The design monochloramine residual for RO feed water ranges from 0.5 to 2.5 mg/L as Cl₂, with 1.0 mg/L as Cl₂ as the target dose for normal operation. As shown in Figure 3-4 the average monochloramine residual during the RO performance test was 0.6 mg/L as Cl₂. Monochloramine is an oxidant and if the membranes are exposed to high concentrations for an extended period, salt passage will increase. Thus, it is preferred to maintain the minimum monochloramine residual required for biofouling protection.

All COPCs in the RO permeate were below the method detection limit, except for 1,4-dioxane and TCE. 1,4-dioxane concentrations were reduced by approximately 90% to below the method reporting limit of 0.07 µg/L. TCE is not well removed by RO with RO permeate concentrations ranging from 1.6 - 2.4 µg/L, which is expected to be removed by the downstream decarbonator process. TCE concentrations in the RO feed water were contributed by Charnock WTP source water (Table 4-4) with GAC effluent samples resulting in non-detect during the Olympic AWTF performance test (Table 2-13) and 7-day acceptance test (Table 4-14).

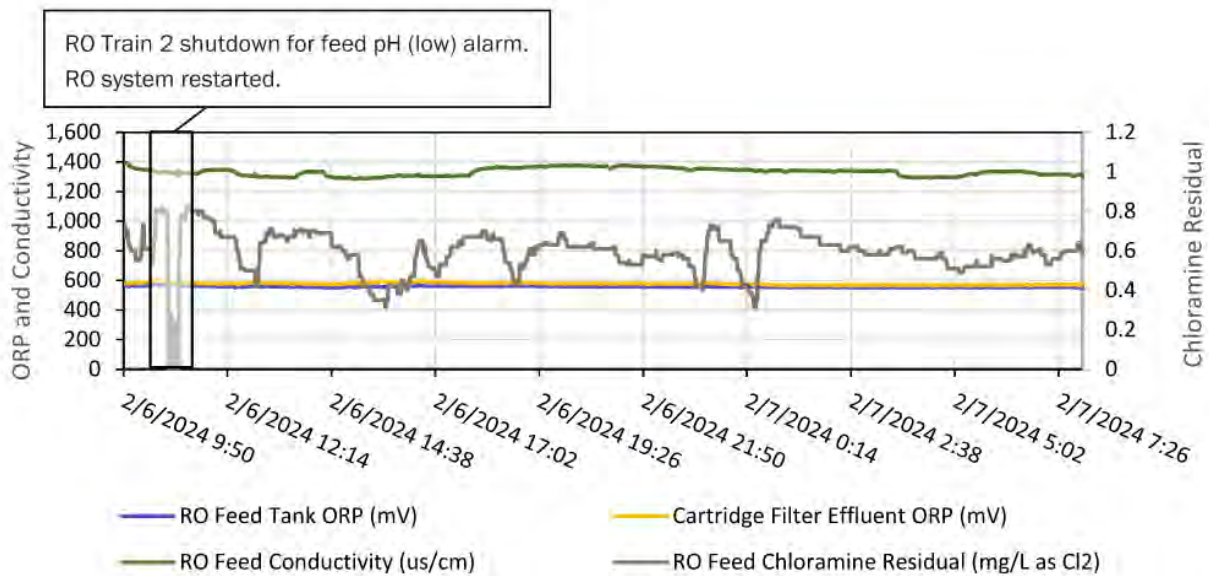


Figure 3-4. RO feed water quality monitoring – ORP, conductivity, chloramine residual

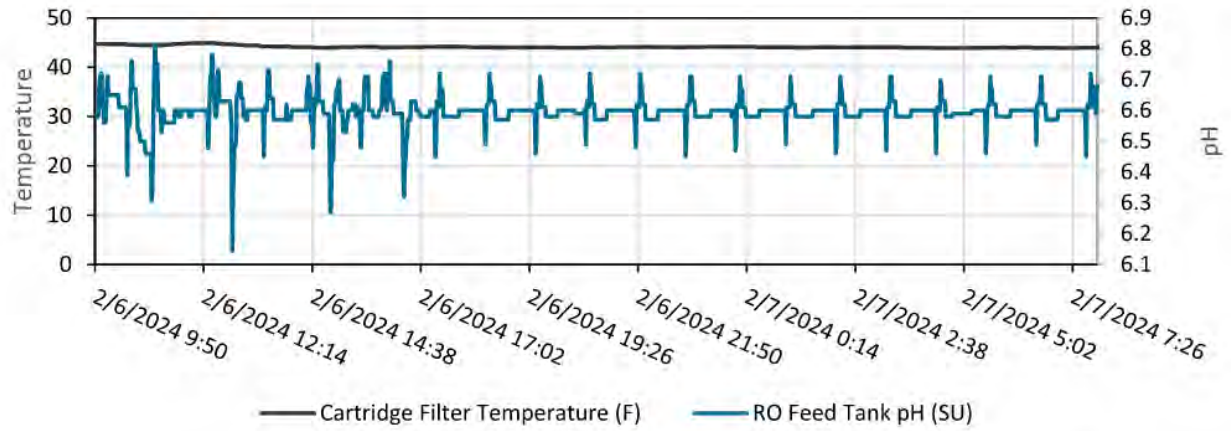


Figure 3-5. RO feed water quality monitoring – temperature and pH

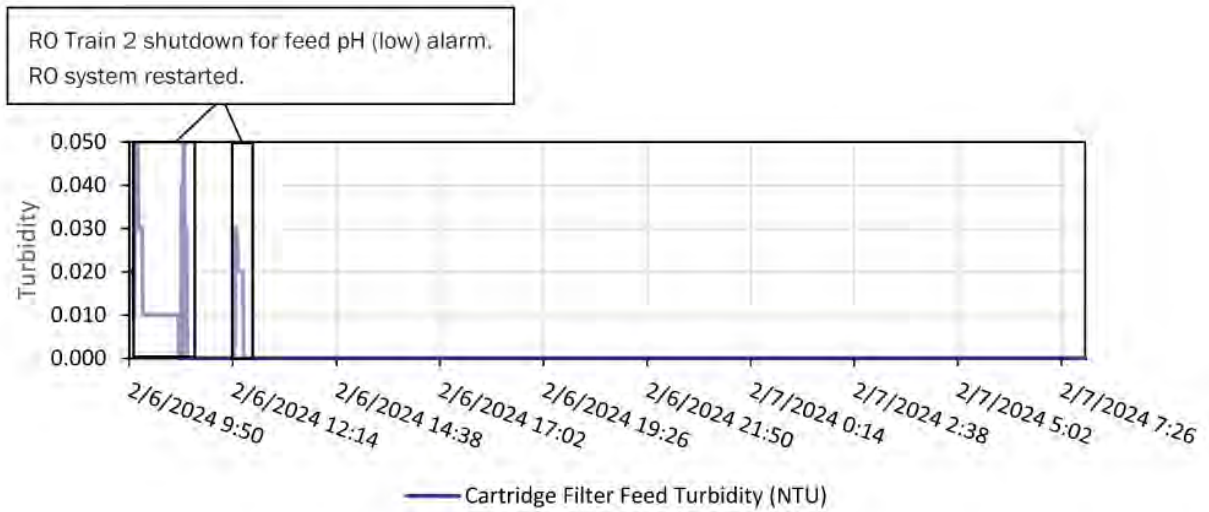


Figure 3-6. RO feed water quality monitoring – turbidity

Table 3-5. FRR0 Performance Test Water Quality Monitoring											
Group	Parameter	Method	Unit	MDL	MRL	Day 1 (2/6/2024)				Day 2 (2/7/2024)	
						RO Feed	RO Skid 2 Permeate	RO Skid 4 Permeate	RO Skid 4 Duplicate Permeate	RO Feed	RO Skid 3 Permeate
Online and Field Monitors	ORP	Online	millivolts	-	-	560	-	-	-	557	-
	Temperature	Online	Fahrenheit	-	-	69.9	-	-	-	69.3	-
	pH	Online	standard unit	-	-	6.60	-	-	-	6.60	-
	Conductivity	Online	µs/cm	-	-	1340	-	-	-	1,313	-
	Turbidity	Online	NTU	-	-	0.001	-	-	-	<0.001	-
	Chloramine Residual	Online	mg/L as Cl ₂	-	-	0.58	-	-	-	0.61	-
	Ammonia Residual ^a	Online	mg/L as N	-	-	-	-	-	-	-	-
	Chlorine to Ammonia (N) Ratio ^a	Online	-	-	-	-	-	-	-	-	-
	SDI	Field	-	-	-	1.29	-	-	-	1.35	-
Background Water Quality	Aggressive Index	AWWA	--	--	--	11.6	7.22	6.44	--	11.7	6.97
	Alkalinity	SM 2320B	mg/L as CaCO ₃	7.2	20	220	16 J	12 J	--	250	11 J
	Aluminum	EPA 200.8	mg/L	0.0044	0.02	0.0052 J	BDL	BDL	--	0.0059 J	BDL
	Ammonia	EPA 350.1	mg/L as N	0.017	0.01	0.27	0.067 J	0.058 J	--	0.25	0.068 J
	Arsenic	EPA 200.8	mg/L	0.000074	0.0004	0.0013	BDL	BDL	--	0.0011	BDL
	Barium	EPA 200.8	mg/L	0.00014	0.001	0.065	0.00067 J	BDL	--	0.062	0.00015 J
	Bicarbonate	SM 2320B	mg/L	8.8	24	270	19 J	15 J	--	310	13 J
	Boron	EPA 200.7	mg/L	0.003	0.01	0.11	0.078	0.07	--	0.11	0.066
	Bromide	EPA 300.1	mg/L	0.0085	0.05	0.56	0.2	0.22	--	0.64	0.2
	Calcium	EPA 200.7	mg/L	0.024	0.5	124	1.41	0.266 J	--	128	0.22 J
	CCPP	Lab calculated	mg/L as CaCO ₃	-100	-100	-35	-181	-129	--	-22	-33.7
	Chlorate	EPA 300.0	mg/L	0.0017	0.01	0.21	0.012	0.0087	--	0.24	0.0079
	Chloride, Total	SM 2320B	mg/L	0.19	0.5	120	5.6	1.8	--	110	1.6
	Chromium 6+	EPA 218.6	µg/L	0.0079	0.02				--		
	Color	SM 2120B	Color Number	--	3.0	BDL	BDL	BDL	--	BDL	BDL



Table 3-5. FRR0 Performance Test Water Quality Monitoring											
Group	Parameter	Method	Unit	MDL	MRL	Day 1 (2/6/2024)				Day 2 (2/7/2024)	
						RO Feed	RO Skid 2 Permeate	RO Skid 4 Permeate	RO Skid 4 Duplicate Permeate	RO Feed	RO Skid 3 Permeate
	Copper	EPA 200.8	mg/L	0.00023	0.0005	0.0023	BDL	0.0077	--	0.0035	BDL
	Fluoride, Total	SM 2320B	mg/L	0.009	0.1	0.3	0.026 J	0.021 J	--	0.27	0.023 J
	Hardness	SM 2340C	mg/L as CaCO ₃	0.221	3.31	543	6.05	BDL	--	549	BDL
	Heterotrophic plate count	SM 9215B	MPN/100mL	2.0	2.0	BDL	21	2	--	BDL	BDL
	Iron, Dissolved	EPA 200.7	mg/L	0.005	0.03	BDL	BDL	BDL	--	BDL	BDL
	Iron, Total	EPA 200.7	mg/L	0.0065	0.03	BDL	BDL	BDL	--	BDL	BDL
	Lead	EPA 200.8	mg/L	0.000083	0.0002	0.00012 J	BDL	0.00078	--	0.00016 J	BDL
	LSI	SM 2330B	--	-20	-10	-0.364	-4.46	-5.23	--	-0.247	-4.7
	Magnesium	EPA 200.7	mg/L	0.039	0.5	54.5	0.606	0.111 J	--	55.4	0.091 J
	Manganese, Dissolved	EPA 200.8	mg/L	0.00011	0.001	0.0036	BDL	BDL	--	0.0012	BDL
	Manganese, Total	EPA 200.8	mg/L	0.00011	0.001	0.0035	BDL	BDL	--	0.0011	BDL
	Nitrate	EPA 353.2	mg/L as N	0.04	0.2	1.8	0.3	0.17 J	--	1.1	0.094 J
	Nitrite	EPA 353.2	µg/L as N	42	100	BDL	BDL	BDL	--	BDL	BDL
	Odor	EPA 140.1	TON	--	1.0	1.0 J	1.0 J	1.0 J	--	1.0 J	1.0 J
	Phosphate	SM 4500P-B	mg/L as PO ₄	0.021	0.03	0.22	BDL	BDL	--	0.2	BDL
	Potassium	EPA 200.7	mg/L	0.086	0.5	2.8	0.30 J	0.20 J	--	2.7	0.21 J
	Selenium	EPA 200.8	mg/L	0.000067	0.0004	0.0033	BDL	BDL	--	0.0027	BDL
	Silica	EPA 200.7	mg/L	0.0086	0.1	41	1.5	0.5	--	41	0.58
	Silica, Dissolved	EPA 200.7	mg/L	0.0086	0.1	41	1.6	0.5	--	40	0.57
	Sodium	EPA 200.7	mg/L	0.13	1	91	10	6.9	--	91	6.8
	Strontium	EPA 200.7	mg/L	0.000036	0.0002	0.71	0.0071	0.0012	--	0.7	0.0011
	Sulfate	SM 2320B	mg/L	0.72	1.5	370	3.6	0.83	--	360	0.7
	Total Coliform	SM 9221B	MPN/100mL	1.8	1.8	BDL	BDL	BDL	--	BDL	BDL
	Total Dissolved Solids	SM 2540C	mg/L	4	10	950	34	19	--	940	17



Table 3-5. FRR0 Performance Test Water Quality Monitoring											
Group	Parameter	Method	Unit	MDL	MRL	Day 1 (2/6/2024)				Day 2 (2/7/2024)	
						RO Feed	RO Skid 2 Permeate	RO Skid 4 Permeate	RO Skid 4 Duplicate Permeate	RO Feed	RO Skid 3 Permeate
COPCs	1,1-DCA	EPA 524.2	µg/L	0.27	0.5	BDL	BDL	BDL	BDL	BDL	BDL
	1,1-DCE	EPA 524.2	µg/L	0.16	0.5	BDL	BDL	BDL	BDL	BDL	BDL
	1,2,3-TCP	SRL 524M-TCP	µg/L	0.0012	0.005	BDL	BDL	BDL	BDL	BDL	BDL
	1,4-Dioxane	EPA 522	µg/L	0.028	1	0.27	0.039 J	0.028 J	0.028 J	0.35	0.033 J
	Carbon Tetrachloride	EPA 524.2	µg/L	0.27	0.5	BDL	BDL	BDL	BDL	BDL	BDL
	Cis-1,2-DCE	EPA 524.2	µg/L	0.25	0.5	BDL	BDL	BDL	BDL	BDL	BDL
	PCE	EPA 524.2	µg/L	0.18	0.5	0.39 J	BDL	BDL	0.24 J	BDL	BDL
	TCE	EPA 524.2	µg/L	0.18	0.5	7.8	1.6	2.2	2.4	4.8	2.3
	1,1,2-Trichloroethane	EPA 524.2	µg/L	0.19	0.5	BDL	BDL	BDL	BDL	BDL	BDL
	1,2-Dichloroethane	EPA 524.2	µg/L	0.24	0.5	BDL	BDL	BDL	BDL	BDL	BDL
	Benzene	EPA 524.2	µg/L	0.15	0.5	BDL	BDL	BDL	BDL	BDL	BDL
	MTBE	EPA 524.2	µg/L	0.94	2	BDL	BDL	BDL	BDL	BDL	BDL
	PFOA	EPA 537.1	ng/L	0.6	1.8	BDL	BDL	BDL	BDL	BDL	BDL
	trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.26	0.5	BDL	BDL	BDL	BDL	BDL	BDL
	Vinyl Chloride	EPA 524.2	µg/L	0.18	0.5	BDL	BDL	BDL	BDL	BDL	BDL

a. Ammonia and chlorine-t-ammonia ratio readings were not available due to unavailability of analyzer reagents.

µs/cm = microsiemens per centimeter

M = analytical qualifier specifying sample was analyzed outside of method hold time.



3.2.3 Documentation of System or Equipment Failures or Outages

RO Train 1 retrofit was still under construction and consequently was not available for the FRRO performance test. The feed tank monochloramine and ammonia analyzer was not in operation due to missing chemical reagents. Instead, the cartridge filter effluent chloramine analyzer was used to monitor chloramine residual during performance testing.

3.3 Deviation from Acceptance Test Plan

RO Train 1 was not available for the entirety of the FRRO performance test as it was still under construction. RO Trains 3 and 4 were operated for approximately 2 hours and 1 hour, respectively, until shutdown was initiated by individual stage high differential pressure. RO Trains 3 and 4 were operated for approximately 30 minutes prior to collecting water quality samples to achieve steady state. Due to an issue with scaling observed in the brine lines, a more conservative (88 percent maximum) recovery was chosen for RO Train 4 for the FRRO performance test. Continuous operation of RO Trains 3 and 4 at 90 percent recovery were evaluated during the 7-day Acceptance Test.

The Arcadia wells were not in operation during FRRO performance testing. All conditions were conducted with a blend of Charnock WTP and Olympic AWTF water.

3.4 Operational and Treatment Performance Compliance

RO Trains 2, 3, and 4 were operated at the maximum design flow of 1,900 gpm at the specified antiscalant dose during the FRRO performance test. A summary of the performance criteria and compliance during the FRRO performance test is provided in Table 3-6.

Parameter	Criteria	Compliance
System Recovery	90%	Train 2 and Train 3 achieved; Train 4 operated to 88% per agreed-upon goals
Feed Flow Range, per Train	1,650 to 1,900 gpm	Achieved
Feed Water pH	≥ 6.6	Achieved
Antiscalant Dose	2.4 to 4.5 mg/L (Avista Vitec-4000) or 0.8 to 1.2 mg/L (AWC A-119)	Achieved
COPCs and Background Water Quality	Document treatment performance	Documented

Section 4

7-day Acceptance Test Results

This section reviews the outcomes of the 7-Day Acceptance Test.

4.1 Overview of 7-day Acceptance Test

The 7-day acceptance test was conducted from 2/12/2024 through 2/18/2024 to confirm that UV-AOP, GAC, and FRRO systems satisfy treatment and operational performance criteria during full operation of the expanded Arcadia WTP and Olympic AWTF. During the 7-day acceptance test period, test conditions were varied to evaluate full plant performance under anticipated treatment flows and well blends. Specified test conditions were initiated at approximately 7 a.m. each day. All Arcadia WTP and Olympic AWTF treatment processes were monitored to document operational conditions and confirm operational compliance of new and modified treatment processes. A suite of water quality samples was collected at each Arcadia WTP and Olympic AWTF treatment process to confirm treatment performance. The existing reservoir aeration system was not operated during the 7-day acceptance test as the mechanical surface aeration system was removed following DDW approval on June 23, 2023. All treated water during the acceptance test period were discharged to the reservoir, where it was subsequently pumped to the storm drain system via temporary pumps.

The 7-day acceptance test performance criteria for the new and modified treatment units are provided in Table 4-1. Each treatment process during the test period was monitored for COPCs to document removals across each treatment unit. Results for COPCs are reported to the detection limit for purposes of reporting (DLR).

Table 4-1. 7-Day Acceptance Test Performance Criteria		
System	Parameter	Criteria
Greensand	Iron ^a	≤ 0.3 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)
	Manganese ^a	≤ 0.05 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)
UV-AOP	1,4-dioxane	≥ 2.4 log removal ^b
	TCE	≥ 2.2 log removal ^b
	PCE	≥ 2.3 log removal ^b
	Total flow	2,000 gpm
	UVT	≥ 96%
	UV System Power	329 kW
	H ₂ O ₂ Dose	Maximum H ₂ O ₂ dose of 40 mg/L
GAC	H ₂ O ₂	Quench residual H ₂ O ₂ to non-detect
	COPCs	Document treatment performance
	Loading Rate	≤ 5.9 gpm/ft ²
	EBCT	≥ 5 minutes
	Headloss	≤ 10-inch w.c./ft bed depth
FRRO	System Recovery	90%
	Feed Flow Range, per Train	1,650 to 1,900 gpm
	Feed Water pH	≥ 6.6
	Antiscalant Dose	2.4 - 4.5 mg/L (Avista Vitec-4000) or 0.8 to 1.2 mg/L (AWC A-119)
	COPCs and Background Water Quality	Document treatment performance
Decarbonator	Carbon Dioxide	≤ 12 mg/L in effluent
	Flow Rate	2,800 gpm (max)
	Liquid Loading Rate	29.6 gpm/ft ² (max)
Arcadia WTP Final Effluent (Arcadia Reservoir Effluent)	Organic Constituents	Exhibit 6, Table 3
	Inorganic Constituents	Exhibit 6, Table 4
	DDW Water Quality Standards	MCL _{eq} < 1 ^b
	pH	8.0 to 8.5
	Total Dissolved Solids	350 to 500 mg/L
	Turbidity	0.1 to 0.2 NTU
	Alkalinity	75 - 150 mg/L as CaCO ₃
	Fluoride	0.5 to 1.0 mg/L
	LSI	-1 to 1
CCPP	N/A. For informational purposes only	

a. Iron and manganese criteria concentrations are based on feed water quality requirements specified in RO Specifications 46 63 23 Section 2.01. The greensand filter was operated to achieve the City target greensand effluent concentrations of iron + manganese ≤ 0.06 mg/L.

b. Log removal criteria based on potential, future treatment plant influent concentrations.

MCL_{eq} = maximum contaminant level equivalent calculated by the sum of each contaminant in the fully treated water divided by its respective maximum contaminant level (MCL) or notification level (where applicable), which must be less than 1.

4.2 7-Day Acceptance Test Conditions

During the 7-day acceptance test period, the Arcadia WTP and Olympic AWTF was operated fully and in automatic mode for 7 consecutive days. New and modified unit processes and finished water were monitored and sampled daily to confirm operational and treatment performance. A summary of system flows and operational parameters is provided in Table 4-2. Test conditions were operated at steady state, and samples were collected at least 2 hours after initiation of new test conditions.

4.3 Source Water Quality Monitoring

Source water quality monitoring samples were collected for the Olympic Wells (S4) and the greensand effluent from the Charnock WTP (S7). Source water monitoring samples were collected daily for each test condition shown previously in Table 4-2. Water quality data collected are presented in Table 4-3 and Table 4-4.

This page intentionally left blank.



Table 4-2. 7-day Acceptance Test Conditions															
Day	No.	Test ID	Flow Rate Targets										System Operation		
			Charnock/Arcadia Feed		Olympic Well Blend				RO System				UV-AOP System	GAC System	RO System
			Charnock WTP (gpm)	Arcadia Wells (gpm)	SM-4 (gpm)	SM-8 (gpm)	SM-9 (gpm)	Total Olympic Feed (gpm)	RO Feed Tank Inflow (gpm)	RO Bypass (gpm)	RO Feed (gpm)	RO Permeate (gpm)	Reactor in Operation (Online Unit #)	Trains in Operation (Online Unit #)	Skids in Operation (Online Unit #)
1	1	AT-1	4,000	0	0	1,000	0	1,000	5,000	760	3,800	3,420	1 (2)	2 (2,3)	2 (3,4)
2	2	AT-2	4,000	0	0	1,000	0	1,000	5,000	760	3,800	3,420	1 (2)	2 (2,3)	2 (2,3)
3	3	AT-3	4,000	0	0	1,000	0	1,000	5,000	760	3,800	3,420	1 (2)	2 (1,2)	2 (2,4)
4	4	AT-4	5,300	0	0	1,000	0	1,000	6,300	1,140	5,700	5,130	1 (2)	2 (1,2)	3 (2,3,4)
5	5	AT-5	3,200	0	0	1,000	0	1,000	4,200	760	3,800	3,420	1 (2)	2 (3,4)	2 (3,4)
6	6	AT-6	3,200	0	0	1,000	0	1,000	4,200	575	3,800	3,420	1 (2)	2 (3,4)	2 (2,4)
7	7	AT-7	1,200	0	0	1,000	0	1,000	2,200	439	1,900	1,710	1 (2)	2 (3,4)	1 (2)



Table 4-3. 7-Day Acceptance Test Source Water Monitoring – Olympic Wells

Group	Parameter	Method	Unit	MRL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/14/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
Background Water Quality	Aggressive Index	AWWA	--	--	11.9	12.3	12.2	12.1	12.0	12.1	12.1
	Alkalinity	SM 2320B	mg/L as CaCO ₃	20	320	320	320	330	330	330	330
	Aluminum	EPA 200.8	mg/L	0.02	BMRL	0.053	BMRL	BMRL	BMRL	BMRL	BMRL
	Ammonia	EPA 350.1	mg/L as N	0.01	0.32	0.42	0.55	0.49	0.39	0.64	0.51
	Arsenic	EPA 200.8	mg/L	0.0004	0.0007	0.0007	0.00072	0.00069	0.00074	0.00065	0.00072
	Barium	EPA 200.8	mg/L	0.001	0.053	0.054	0.056	0.056	0.055	0.055	0.055
	Bicarbonate	SM 2320B	mg/L as HCO ₃	24	390	390	390	400	400	400	400
	Boron	EPA 200.7	mg/L	0.01	0.14	0.14	0.14	0.14	0.15	0.15	0.15
	Bromide	EPA 300.1	mg/L	0.05	0.63	0.62	0.64	0.62	Not Analyzed ^b	0.64	0.64
	Calcium	EPA 200.7	mg/L	0.5	110	111	120	120	115	112	113
	CCPP	Lab calculated	mg/L as CaCO ₃	-100	5.96	41.1	34.2	25.6	17.4	24.6	32.3
	Chlorate	EPA 300.0	mg/L	0.01	0.093	0.078	0.13	0.088	Not Analyzed ^b	0.087	0.094
	Chloride, Total	EPA 300.0	mg/L	0.5	120	120	120	120	130	130	120
	Chromium 6+	EPA 218.6	µg/L	0.02	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b
	Color	SM 2120B	Color Number	3	BMRL	BMRL	5	BMRL	BMRL	BMRL	BMRL
	Copper	EPA 200.8	mg/L	0.0005	BMRL	BMRL	BMRL	BMRL	0.0061	BMRL	BMRL
	Fluoride, Total	EPA 300.0	mg/L	0.1	0.25	0.26	0.26	0.26	0.26	0.26	0.25
	Hardness	SM 2340C	mg/L as CaCO ₃	3.31	489	493	529	528	506	494	501
	Heterotrophic plate count	SM 9215B	MPN/100 mL	2	370	170	BMRL	BMRL H	62	320	100
	Iron, Dissolved	EPA 200.7	mg/L	0.02	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Iron, Total	EPA 200.7	mg/L	0.02	BMRL	BMRL	BMRL	BMRL	0.024	BMRL	0.03
	Lead	EPA 200.8	mg/L	0.0002	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	LSI	SM 2330B	--	-10	-0.027	0.364	0.238	0.131	0.061	0.132	0.215
	Magnesium	EPA 200.7	mg/L	0.5	51.7	52.3	55.7	55.5	53.4	52.1	53
	Manganese, Dissolved	EPA 200.8	mg/L	0.001	0.0096	0.013	BMRL	0.012	0.015	0.019	0.018
	Manganese, Total	EPA 200.8	mg/L	0.001	0.0099	0.014	0.013	0.014	0.016	0.019	0.019
	Nitrate	EPA 353.2	mg/L as N	0.2	6.5	5.5	5.5	5.4	5.4	5.3	5.8
	Nitrite	EPA 353.2	µg/L as N	100	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Odor	EPA 140.1	TON	1	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Phosphate	SM 4500P-B	mg/L as PO ₄	0.03	0.28	0.26	0.28	0.27	0.26	0.26	0.26
	Potassium	EPA 200.7	mg/L	0.5	2.5	2.5	2.5	2.5	2.7	2.7	2.7
	Selenium	EPA 200.8	mg/L	0.0004	0.0035	0.0037	0.0038	0.0039	0.0038	0.0037	0.0038
	Silica	EPA 200.7	mg/L	0.1	38	38	40	40	38	37	38
Silica, Dissolved	EPA 200.7	mg/L	0.1	38	37	40	40	37	38	38	
Sodium	EPA 200.7	mg/L	1	110	100	110	100	110	110	110	
Strontium	EPA 200.7	mg/L	0.0002	0.58	0.58	0.58	0.57	0.61	0.59	0.6	
Sulfate	SM 2320B	mg/L	1.5	220	230	230	230	240	240	230	
Total Coliform	SM 9221B	MPN/100mL	1.1	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	
Total Dissolved Solids	SM 2540C	mg/L	10	880	900	900	900	910	890	900	
Total Organic Carbon	SM 5310B	mg/L	0.3	0.61	0.63	0.69	0.47	0.54	0.56	0.54	



Table 4-3. 7-Day Acceptance Test Source Water Monitoring – Olympic Wells											
Group	Parameter	Method	Unit	DLR	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/14/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
COPCs	1,1-DCA	EPA 524.2	µg/L	0.5	0.78	0.77	0.74	0.75	0.72	0.69	0.71
	1,1-DCE	EPA 524.2	µg/L	0.5	4.0	4.0	4.4	3.8	3.6	3.4	3.6
	1,2,3-TCP	SRL 524M-TCP	µg/L	0.005	0.043	0.045	0.042	0.042	0.044	0.046	0.045
	1,4-Dioxane	EPA 522a	µg/L	1.4 ^a	46 M	46 M	49 M	50 M	57 M	64 M	53 M
	Carbon Tetrachloride	EPA 524.2	µg/L	0.5	0.96	0.8	0.84	0.85	0.73	0.77	0.83
	Cis-1,2-DCE	EPA 524.2	µg/L	0.5	1.9	1.9	1.9	1.9	2.0	1.9	2.0
	PCE	EPA 524.2	µg/L	0.5	1.3	1.1	1.3	1.6	1.4	1.3	1.6
	TCE	EPA 524.2	µg/L	0.5	51	48	47	49	48	46	48
	1,1,2-Trichloroethane	EPA 524.2	µg/L	0.5	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	1,2-Dichloroethane	EPA 524.2	µg/L	0.5	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Benzene	EPA 524.2	µg/L	0.5	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	MTBE	EPA 524.2	µg/L	2	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	PFOA	EPA 537.1	ng/L	1.8	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.5	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
Vinyl Chloride	EPA 524.2	µg/L	0.5	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	

a. 1,4-dioxane method (EPA 522) reporting and detection level higher than treated water samples (i.e., UV effluent or finished water) due to higher concentrations that require sample dilution.

b. Samples were not analyzed by the external laboratory, due to an internal miscommunication which led to the laboratory discarding collected samples. Hexavalent chromium concentrations for Olympic wells during the Performance Test are available in Table 2-4. Source water hexavalent chromium concentrations are low ranging from 0.00028-0.00089 mg/L and are not a contaminant of concern. Additional hexavalent chromium samples will be collected following permit amendment approval.

BMRL – sample result was below the method reporting limit.

H – analysis was performed outside the EPA recommended hold time.

M – sample was diluted prior to analysis due to high concentration or nature of matrix interferences. The MDL and MRL were raised due to the dilution.

Table 4-4. 7-day Acceptance Test Source Water Monitoring – Charnock WTP

Group	Parameter	Method	Unit	MRL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
Background Water Quality	Aggressive Index	AWWA	--	--	12.6	12.8	12.7	12.7	12.5	12.5	12.5
	Alkalinity	SM 2320B	mg/L as CaCO ₃	20	340	340	340	350	340	340	350
	Aluminum	EPA 200.8	mg/L	0.02	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Ammonia	EPA 350.1	mg/L as N	0.01	0.34	0.60	0.38	0.49	0.59	0.64	0.51
	Arsenic	EPA 200.8	mg/L	0.0004	0.00065	0.00083	0.00076	0.00086	0.0074	0.00069	0.00072
	Barium	EPA 200.8	mg/L	0.001	0.052	0.055	0.057	0.057	0.052	0.053	0.054
	Bicarbonate	SM 2320B	mg/L as HCO ₃	24	410	410	420	430	410	410	420
	Boron	EPA 200.7	mg/L	0.01	0.2	0.22	0.22	0.23	0.18	0.14	0.14
	Bromide	EPA 300.1	mg/L	0.05	0.89	1.2	1.1	1.1	Not Analyzed ^b	0.50	0.54
	Calcium	EPA 200.7	mg/L	0.5	142	149	157	160	137	133	134
	CCPP	Lab calculated	mg/L as CaCO ₃	-100	66.2	75.1	380	80.2	64.1	61.2	64.3
	Chlorate	EPA 300.0	mg/L	0.01	0.22	0.44	0.38	0.38	Not Analyzed ^b	0.20	0.23
	Chloride, Total	EPA 300.0	mg/L	0.5	120	140	140	140	110	110	110
	Chromium 6+	EPA 218.6	µg/L	0.02	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b	Not Analyzed ^b
	Color	SM 2120B	Color Number	3	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Copper	EPA 200.8	mg/L	0.0005	0.0019	0.0029	0.0020	0.0022	0.023	0.0019	BMRL
	Fluoride, Total	EPA 300.0	mg/L	0.1	0.28	0.33	0.30	0.30	0.28	0.29	0.28
	Hardness	SM 2340C	mg/L as CaCO ₃	3.31	600	629	659	672	576	558	560
	Heterotrophic plate count	SM 9215B	MPN/100mL	2	BMRL	BMRL	BMRL	BMRL H	BMRL	2	BMRL
	Iron, Dissolved	EPA 200.7	mg/L	0.02	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Iron, Total	EPA 200.7	mg/L	0.02	BMRL	BMRL	BMRL	BMRL	BMRL	0.059	BMRL
	Lead	EPA 200.8	mg/L	0.0002	BMRL	BMRL	BMRL	BMRL	0.0011	BMRL	BMRL
	LSI	SM 2330B	--	-10	0.613	0.812	0.704	0.775	0.593	0.548	0.562
		WaterPro with field pH	--								
	Magnesium	EPA 200.7	mg/L	0.5	59.7	62.2	64.8	65.9	56.9	54.7	55.0
	Manganese, Dissolved	EPA 200.8	mg/L	0.001	0.00011	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Manganese, Total	EPA 200.8	mg/L	0.001	0.00032	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Nitrate	EPA 353.2	mg/L as N	0.2	0.46	0.77	0.67	0.85	0.87	1.7	1.9
	Nitrite	EPA 353.2	µg/L as N	100	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Odor	EPA 140.1	TON	1	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Phosphate	SM 4500P-B	Mg/L as PO ₄	0.03	0.17	0.22	0.20	0.22	0.21	0.18	0.25
	Potassium	EPA 200.7	mg/L	0.5	3.1	3.2	3.2	3.2	3.2	3.0	3.1
	Selenium	EPA 200.8	mg/L	0.0004	0.0012	0.0019	0.0017	0.0021	0.0020	0.0037	0.0036
Silica	EPA 200.7	mg/L as SiO ₂	0.1	39	40	43	43	40	41	41	
Silica, Dissolved	EPA 200.7	mg/L as SiO ₂	0.1	40	40	43	43	40	41	41	
Sodium	EPA 200.7	mg/L	1	93	100	100	100	87	77	82	
Strontium	EPA 200.7	mg/L	0.0002	0.81	0.85	0.85	0.87	0.80	0.80	0.80	
Sulfate	SM 2320B	mg/L	2	320 M	330 M	330 M	330 M	290	260	260	
Total Coliform	SM 9221B	MPN/100mL	1.1	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	
Total Dissolved Solids	SM 2540C	mg/L	10	1,000	1,100	1,100	1,100	960	900	920	



Table 4-4. 7-day Acceptance Test Source Water Monitoring – Charnock WTP											
Group	Parameter	Method	Unit	MRL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
	Total Organic Carbon	SM 5310B	mg/L	0.3	0.66	0.77	0.67	0.75	0.64	0.59	0.58
COPCs	1,1-DCA	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2,3-TCP	SRL 524M-TCP	µg/L	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,4-Dioxane	EPA 522	µg/L	1 ^a	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Carbon Tetrachloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Cis-1,2-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	PCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	0.96	0.90
	TCE	EPA 524.2	µg/L	0.5	4.0	4.8	5.0	5.4	5.9	15	14
	1,1,2-Trichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2-Dichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Benzene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	MTBE	EPA 524.2	µg/L	2	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	PFOA	EPA 537.1	ng/L	1.8	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Vinyl Chloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR

BDLR – sample result was below the DLR.

H – analysis was performed outside the EPA recommended hold time.

M – sample was diluted prior to analysis due to high concentration or nature of matrix interferences. The MDL and MRL were raised due to the dilution.

a. Recommended by the State Board; there is no official California DLR for 1,4-dioxane.

b. Samples were not analyzed by the external laboratory, due to an internal miscommunication which led to the laboratory discarding collected samples. Source water hexavalent chromium concentrations are low ranging from < 0.001 – 0.0024 mg/L and are not a contaminant of concern. Additional hexavalent chromium samples will be collected following permit amendment approval.



This page intentionally left blank.



4.4 Olympic AWTF Greensand System

The Olympic AWTF greensand filters were monitored during the 7-day acceptance test period to confirm pretreatment design specifications for the UV-AOP system are achieved. A summary of water quality and operational parameters is provided in the following sections.

4.4.1 Operational Monitoring

Greensand system monitoring was conducted to confirm operational systems meet specified design criteria. Throughout the duration of the 7-day acceptance test, Greensand filters 5A and 6A were online. Operating conditions at the time of sampling are summarized in Table 4-5. All operating parameters are within expected ranges.

Table 4-5. Operational Monitoring for Olympic AWTF Greensand Filters

Day/Date	Unit(s) in Operation		Flow Rate (gpm)		Loading Rate (gpm/ft ²)	
	Filter 5	Filter 6	Filter 5	Filter 6	Filter 5	Filter 6
Day 1 (2/12/24)	5A	6A	521	533	2.30	2.35
Day 2 (2/13/24)	5A	6A	540	510	2.38	2.25
Day 3 (2/14/24)	5A	6A	540	516	2.38	2.27
Day 4 (2/15/24)	5A	6A	532	510	2.34	2.25
Day 5 (2/16/24)	5A	6A	526	509	2.32	2.24
Day 6 (2/17/24)	5A	6A	522	479	2.30	2.11
Day 7 (2/18/24)	5A	6A	532	498	2.34	2.19

4.4.2 Water Quality Monitoring

The full suite of COPC water quality sampling was collected daily on the Olympic AWTF greensand effluent (S8). Results are summarized in Table 4-6. In addition, daily on-site water quality samples were collected and analyzed using field meters to confirm treatment performance. Field analysis results are presented in Table 4-7. Field tests were not conducted on Days 6 and 7, due to limited weekend staffing availability.

The Olympic greensand filters were able to achieve the goal of < 0.3 mg/L of total iron in the effluent for all days analyzed during the acceptance period. Except for Day 2, the Olympic greensand filters were also able to achieve the goal of < 0.05 mg/L of manganese in the effluent for all days. Note that the high reading of manganese on Day 2 is likely due to field contamination and/or instrumentation error, since the Olympic source water manganese concentrations were consistently, including Day 2, less than 0.01 mg/L. Additionally, effluent sampled at the same location the next day with same operating conditions indicated that the manganese goal was met and previous data (UV-AOP performance testing, see Table 2-5 for reference) was also consistently well below 0.05 mg/L.

Table 4-6. 7-day Acceptance Test Greensand Filter COPCs

Parameter	Method	Unit	DLR	Day 1	Day 2 ^b	Day 3	Day 4	Day 5	Day 6	Day 7
				(2/12/2024)	(2/13/2024)	(2/14/2024)	(2/15/2024)	(2/16/2024)	(2/17/2024)	(2/18/2024)
1,1-DCA	EPA 524.2	µg/L	0.5	0.77	0.73	0.74	0.73	0.71	0.69	0.70
1,1-DCE	EPA 524.2	µg/L	0.5	4.0	3.8	3.8	3.7	3.5	3.4	3.5
1,2,3-TCP	SRL 524M-TCP	µg/L	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,4-dioxane	EPA 522	µg/L	1.4 ^a	48 M	47 M	48 M	44 M	50 M	46 M	50 M
Carbon Tetrachloride	EPA 524.2	µg/L	0.5	0.98	0.85	0.79	0.86	0.73	0.81	0.85
Cis-1,2-DCE	EPA 524.2	µg/L	0.5	1.9	1.8	1.8	1.9	1.9	1.9	2.0
PCE	EPA 524.2	µg/L	0.5	1.3	1.2	1.1	1.4	1.3	1.5	1.5
TCE	EPA 524.2	µg/L	0.5	50	50	50	49	48	47	48
1,1,2-Trichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2-Dichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Benzene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
MTBE	EPA 524.2	µg/L	3.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PFOA	EPA 537.1	ng/L	4.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Vinyl Chloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR

a. 1,4-dioxane method (EPA 522) reporting and detection level higher than treated water samples (i.e., UV effluent or finished water) due to higher concentrations that require sample dilution.

b. Duplicate samples were collected during Day 2. Results shown are an average of reported concentrations.

BDLR – sample result was below the DLR.

M – sample was diluted prior to analysis due to high concentration or nature of matrix interferences. The MDL and MRL were raised due to the dilution.

Table 4-7. Water Quality Monitoring for Olympic AWTF Greensand Filters

Day	SDI	Free Cl ₂ (mg/L as Cl ₂)	Turbidity (NTU)	Iron (mg/L)	Manganese (mg/L)	Combined (mg/L)	Notes
Day 1 (2/12/24)	1.60	> 2.2	0.44	0.00	0.03	0.03	Achieved Fe and Mn Target
Day 2 (2/13/24)	2.11	> 2.2	0.41	0.02	0.13	0.15	High Mn measurement suspected analytical error
Day 3 (2/14/24)	0.80	1.73	0.22	0.02	0.03	0.05	Achieved Fe and Mn Target
Day 4 (2/15/24)	1.04	1.22	0.16	0.01	0.04	0.05	Achieved Fe and Mn Target
Day 5 (2/16/24)	1.50	1.24	0.21	0.01	0.05	0.06	Achieved Fe and Mn Target
Day 6 (2/17/24)	-	-	-	-	-	-	-
Day 7 (2/18/24)	-	-	-	-	-	-	-

4.4.3 Documentation of System or Equipment Failures or Outages

Table 4-8 provides a summary of failures or outages related to the Olympic AWTF greensand filter system.

Table 4-8. Failures or Outages for the Olympic AWTF Greensand Filter System

Item	Duration	Description
SM-9	Days 1-7	Offline for duration of 7-day acceptance test due to VFD issues. Capacity from the Olympic AWTF was limited to 1,000 gpm from SM-8 only.
Greensand Filter 5B	Days 1-7	Unable to be placed online during the 7-day acceptance test due to operational issues with existing filtrate valves.
Greensand Filter 6B	Days 1-7	Unable to be placed online during the 7-day acceptance test due to operational issues with existing filtrate valves.
Greensand effluent free chlorine analyzer	Days 1-7	Not connected to Historian. No SCADA data available for duration of 7-day acceptance test.
Greensand effluent turbidimeter	Days 1-7	Existing turbidimeter were not functional for the duration of 7-day test. Combined effluent field grab samples were collected and analyzed for turbidity. The primary treatment objects of the greensand filters are to provide iron and manganese removal for downstream processes (i.e., UV-AOP and FRRO). Turbidity is not a treatment objective for the greensand system and does not impact successful achievement of system performance criteria (i.e., greensand is not implemented to achieve disinfection credits through turbidity removal).

4.5 UV-AOP System

The UV-AOP system was monitored during the 7-day acceptance test to confirm the UV-AOP system meets design and treatment specifications. A summary of water quality and operational parameters is provided in the following sections.

4.5.1 Operational Monitoring

UV-AOP system monitoring was conducted to confirm operational systems meet specified design criteria. UV Train 2 was online throughout the duration of the 7-day acceptance test. Daily monitored system parameter readings at the time of sampling were recorded and are provided in Table 4-9. Operating conditions at time of sampling were within expected parameters. System parameters that were monitored continuously by SCADA and Historian are also provided as averages in the same table.

4.5.2 Water Quality Monitoring

The full suite of COPC water quality sampling was collected daily on the UV-AOP effluent (S10). Results are summarized in Table 4-10. The UV-AOP system was able to achieve all log removal goals outlined in the 7-day Acceptance Test Performance Criteria Table 4-1. In addition, daily on-site water quality samples were collected and analyzed using field meters to confirm treatment performance. Field analysis results are presented in Table 4-11.

All key water quality and parameter goals were met during the 7-day acceptance test period with all UV-AOP effluent samples below the method reporting limit for 1,4-dioxane, PCE, and TCE. Additionally, all predicted log removals achieved the compliance log removal targets of 2.4, 2.3, and 2.2 for 1,4-dioxane, PCE, and TCE, respectively.

Table 4-9. Operational Monitoring for UV-AOP System									
Parameter	Monitoring Type	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)	
Train in Operation	N/A	2	2	2	2	2	2	2	
Compliance Log Setpoint (1,4-D/TCE/PCE)	Field Reading	2.4/2.2/2.3	2.4/2.2/2.3	2.4/2.2/2.3	2.4/2.2/2.3	2.4/2.2/2.3	2.4/2.2/2.3	2.4/2.2/2.3	
Operational Log Setpoint (1,4-D/TCE/PCE)	Field Reading	2.7/2.6/2.8	2.7/2.6/2.8	2.7/2.6/2.8	2.7/2.6/2.8	2.7/2.6/2.8	2.7/2.6/2.8	2.7/2.6/2.8	
Calculated 1,4-D Log Reduction ^a	Field Reading	2.79	2.76	2.77	2.75	2.76	2.77	2.77	
Calculated PCE Log Reduction ^a	Field Reading	2.82	2.82	2.83	2.82	2.82	2.82	2.82	
Calculated TCE Log Reduction ^a	Field Reading	2.91	2.89	2.90	2.89	2.90	2.90	2.90	
ST Setpoint (s ⁻¹)	Field Reading	130,000	130,000	130,000	130,000	130,000	130,000	130,000	
Flow Rate (gpm)	Field Reading	1,068	1,060	1,050	1,050	1,014	1,014	1,020	
UV intensity	Section 1	Field Reading	4.19	4.12	4.10	4.12	4.03	4.9	4.13
	Section 2		0.26	0.0	0.0	0.0	0.29	0.29	0.30
	Section 3		4.43	4.32	4.30	4.31	4.29	4.30	4.29
	Section 4		4.80	4.72	4.74	4.69	4.42	4.69	4.71
	Section 5		4.52	4.42	4.38	4.42	4.38	4.39	4.37
	Section 6		0.24	0.0	0.0	0.0	0.24	0.24	0.24
	Section 7		0.12	0.0	0.0	0.0	0.12	0.12	0.12
	Section 8		0.36	0.0	0.0	0.0	0.37	0.36	0.37
	Section 9		5.03	4.91	4.90	4.89	4.88	4.92	4.86
	Section 10		5.45	5.37	5.35	5.36	5.35	5.38	5.35
	Section 11		5.18	5.04	5.00	4.96	4.92	4.91	4.89
Lamp power, Section 1 ^b (%)	Field Reading	57.5%	55.5%	55.5%	55.5%	55.5%	-	55.5%	
Lamp power, Section 1 ^b (kW)	Calculated	13.8	13.3	13.3	13.3	13.3	-	13.3	
Lamp age, Section 1 ^b	Field Reading	1,117	1,192	1,216	1,234	1,238	-	1,316	
H ₂ O ₂ Setpoint (mg/L)	Field Reading	28.2	25.3	27.7	26.5	25.3	26.9	26.8	
H ₂ O ₂ Injection Rate (gph)	Field Reading	3.01	2.89	3.02	2.83	2.80	2.81	2.75	

a. PLC-predicted log reduction.

b. Section 1's lamp power and age are representative of all operating UV sections, since the same lamp sections were online throughout the 7-day acceptance period.



Table 4-10. 7-day Acceptance Test UV-AOP System Effluent COPCs

Parameter	Method	Unit	MRL	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
				(2/12/2024)	(2/13/2024)	(2/14/2024)	(2/15/2024)	(2/16/2024)	(2/17/2024)	(2/18/2024)
1,1-DCA	EPA 524.2	µg/L	0.5	0.33	0.38	0.38	0.38	0.35	0.37	0.35
1,1-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2,3-TCP	SRL 524M-TCP	µg/L	0.005	0.016	0.019	0.016	0.019	0.016	0.016	0.020
1,4-Dioxane	EPA 522	µg/L	1 ^a	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Carbon Tetrachloride	EPA 524.2	µg/L	0.5	0.695	0.81	0.80	0.825	0.85	0.81	0.81
Cis-1,2-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
TCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,1,2-Trichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2-Dichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Benzene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
MTBE	EPA 524.2	µg/L	3.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PFOA	EPA 537.1	ng/L	4.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Vinyl Chloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR

a. Recommended by the State Board; there is no official California DLR for 1,4-dioxane.
BDLR – sample result was below the DLR.

Table 4-11. Field Sample Analysis Results for UV-AOP System

Day/Date	UV-AOP Feed (S9)			UV-AOP Effluent (S10)		
	H ₂ O ₂ ^a (mg/L)	UVT	pH	H ₂ O ₂ ^a (mg/L)	UVT	pH
Day 1 (2/12/24)	28.2	97.4%	6.86	10.57	97.4%	6.86
Day 2 (2/13/24)	25.3	96.2%	6.91	10.65	98.9%	6.92
Day 3 (2/14/24)	27.7	95.5%	6.88	10.60	97.8%	6.89
Day 4 (2/15/24)	26.5	95.5%	6.94	10.53	97.6%	6.95
Day 5 (2/16/24)	25.3	95.2%	6.86	10.68	98.9%	6.89
Day 6 (2/17/24)	26.9	94.5%	6.66	10.75	98.6%	6.74
Day 7 (2/18/24)	26.8	95.5%	6.92	10.67	94.8%	6.97

a. The field crew was unsuccessful with the tri-iodide titration method, and field concentrations were not collected. System control center calculated data is reported here.

4.5.3 Documentation of System or Equipment Failures or Outages

Table 4-12 provides a summary of failures or outages related to the UV-AOP system.

Table 4-12. Failures or Outages for the UV-AOP System

Item	Duration	Description
UVT field meters	Day 3 & 4	Low UVT shutdown. Bubbles in the UVT field meter sample lines are suspected to be the cause of the shutdowns, and Trojan suggested installing a de-bubbler in the sample line. The system was able to be immediately restarted following the 20-minute off-spec and warmup periods. No further issues related to low UVT were encountered after installation of the de-bubbler through the remainder of the 7-day test, and there have since been no issues with bubbles causing low UVT shutdowns through the time of writing.

4.6 GAC System

The GAC system was monitored during the 7-day acceptance test to confirm the GAC system meets design and treatment specifications. A summary of water quality and operational parameters is provided in the following subsections.

4.6.1 Operational Monitoring

GAC system monitoring was conducted to confirm operational systems meet specified design criteria. Monitored system parameters are averaged for the day and summarized in Table 4-13.

4.6.2 Water Quality Monitoring

The full suite of COPC water quality sampling was collected daily on the GAC train lead vessel effluent (S23) and combined GAC effluent (S11). Results are summarized in Table 4-14. Additional on-site water quality samples were collected and analyzed daily to confirm treatment performance and quenching of H₂O₂. A summary of field water quality samples is provided in Table 4-15.

The GAC system quenched all hydrogen peroxide residual to non-detect for all test conditions during the 7-day acceptance test period. 1,4-Dioxane concentrations were measured in the GAC effluent samples despite being non-detect in the UV-AOP effluent (i.e., GAC feed). Further investigation

determined prior to the 7-day acceptance test, untreated UV-AOP water (i.e., 46-64 µg/L of 1,4-dioxane per Olympic well source water concentrations; Table 4-3) was loaded onto the GAC media while UV-AOP system functional and programming testing was conducted. Because 1,4-dioxane is not well adsorbed by GAC, it will initially adsorb to virgin carbon media when present in the feed water. Once the feed water concentration is reduced to non-detect (i.e., the UV-AOP system is operated), 1,4-dioxane will subsequently desorb (similar to nitrate) from the GAC media into the effluent stream. Thus, even though 1,4-dioxane was non-detect at the UV-AOP effluent during the 7-day acceptance test, it was detected above the DLR in the GAC effluent from some vessels. Despite 1,4-dioxane being detected in the GAC effluent, 1,4-dioxane concentrations were below DLR at the final plant effluent. All other COPCs were non-detect in the GAC effluent, except for 1,2,3-TCP on Day 6 at 0.011 µg/L. It is believed that this value is likely due to contamination.

The ability to operate any GAC trains without proper UV-AOP treatment will not be permitted during normal system operations moving forward. SCADA has been programmed with a permissive requiring the UV-AOP system to be operating and achieving treatment setpoints (i.e., log removals) for forward flow of water and operation of the GAC system; if the UV-AOP system is not meeting the required setpoints, the GAC system inlet valves will not open.

Following the results of the 7-day acceptance test, a flushing program (with UV-AOP treated water) has been initiated and the presence of 1,4-dioxane in the treated effluent is being tested to confirm it desists over time. The GAC vessels were flushed for an approximately 30-hour period in April 2024 and sampled for 1,4-dioxane. Results following the first flushing program with treated UV-AOP water are included in Table 4-16. 1,4-Dioxane was below DLR for trains 3 and 4 in both lead and lag vessels. Trains 1 and 2 were below DLR in the lead vessels, but above the DLR in the lag vessels; the mass transfer zone for 1,4-dioxane has moved from the lead vessel through to the lag vessel. An additional 60-hour flushing period is planned to commence in May 2024 with 1,4-dioxane samples at lead and lag effluent sample locations and across the lag vessel carbon bed (i.e., 40%, 60%, 80% bed depth). Flushing will continue until sampling confirms that all vessels are below the DLR. This data will be included in the final report.

Table 4-13. Operational Monitoring for GAC System

Parameter	Monitoring Type	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 ^b (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)
Trains in Operation	Field Reading	2/3	2/3	1/2	1/2	3/4	3/4	3/4
Feed Flow Rate (gpm)	Field Reading	520/530	519/532	529/527	520/530	485/535	494/508	526/532
Effluent Flow Rate (gpm)	Field Reading	1,050	1,050	1,056	1,050	1,020	1,002	1,058
Loading Rate (gpm/ft ²)	Calculation	4.61	4.61	4.63	4.61	4.47	4.39	4.64
Lead Vessel Differential Pressure (psi)	Field Reading	0.0/0.0	0.0/0.0	0.1/0.0	0.08/0	0/0.01 ^a	0/0.01 ^a	0/0.01 ^a
Lag Vessel Differential Pressure (psi)	Field Reading	0.0/6.6	0.0/8.5	7.5/0	8.4/0	8.5/5.1 ^a	9.9/8.8 ^a	10.0/6.8 ^a
EBCT (min)	Calculation	17.1	17.1	17.0	17.1	17.6	17.9	16.9
Vessel Positions	Field Reading	2A, 3B lead 2B, 3A lag	2A, 3B lead 2B, 3A lag	2A, 3B lead 2B, 3A lag	2A, 3B lead 2B, 3A lag	3B, 4B lead 3A, 4A lag	3B, 4B lead 3A, 4A lag	3B, 4B lead 3A, 4A lag

a. Readings were taken from SCADA.

b. A bump sequence on the GAC was not conducted and was deferred to after 7-day testing.



Table 4-14. 7-day Acceptance Test GAC System COPCs

Parameter	Method	Unit	DLR	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/14/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
1,1-DCA	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,1-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2,3-TCP	SRL 524M-TCP	µg/L	0.005	BMRL	BMRL	BMRL	BMRL	BMRL	0.011	BMRL
1,4-Dioxane	EPA 522	µg/L	1 ^a	4.8	1.7	5.6	2.6	BDLR	3.9	1.8
Carbon Tetrachloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Cis-1,2-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
TCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,1,2-Trichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2-Dichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Benzene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
MTBE	EPA 524.2	µg/L	3.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PFOA	EPA 537.1	ng/L	4.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Vinyl Chloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR

a. Recommended by the State Board; there is no official California DLR for 1,4-dioxane.

BDLR – sample result was below the method reporting limit.

Table 4-15. Results of H ₂ O ₂ Water Quality Monitoring for GAC System					
Day	Date	Train Sampled	Monitoring Location	Result	Analytical Method
1	2/12/2024	2	Lead Vessel Effluent	ND	Field, Peroxide Strip
1	2/12/2024	2	Lag Vessel Effluent	ND	Field, Peroxide Strip
1	2/12/2024	3	Lead Vessel Effluent	ND	Field, Peroxide Strip
1	2/12/2024	3	Lag Vessel Effluent	ND	Field, Peroxide Strip
2	2/13/2024	2	Lead Vessel Effluent	ND	Field, Peroxide Strip
2	2/13/2024	2	Lag Vessel Effluent	ND	Field, Peroxide Strip
2	2/13/2024	3	Lead Vessel Effluent	ND	Field, Peroxide Strip
2	2/13/2024	3	Lag Vessel Effluent	ND	Field, Peroxide Strip
3	2/14/2024	1	Lead Vessel Effluent	ND	Field, Peroxide Strip
3	2/14/2024	1	Lag Vessel Effluent	ND	Field, Peroxide Strip
3	2/14/2024	2	Lead Vessel Effluent	ND	Field, Peroxide Strip
3	2/14/2024	2	Lag Vessel Effluent	ND	Field, Peroxide Strip
4	2/15/2024	1	Lead Vessel Effluent	ND	Field, Peroxide Strip
4	2/15/2024	1	Lag Vessel Effluent	ND	Field, Peroxide Strip
4	2/15/2024	2	Lead Vessel Effluent	ND	Field, Peroxide Strip
4	2/15/2024	2	Lag Vessel Effluent	ND	Field, Peroxide Strip
5	2/16/2024	3	Lead Vessel Effluent	ND	Field, Peroxide Strip
5	2/16/2024	3	Lag Vessel Effluent	ND	Field, Peroxide Strip
5	2/16/2024	4	Lead Vessel Effluent	ND	Field, Peroxide Strip
5	2/16/2024	4	Lag Vessel Effluent	ND	Field, Peroxide Strip
6	2/17/2024	3	Lead Vessel Effluent	ND	Field, Peroxide Strip
6	2/17/2024	3	Lag Vessel Effluent	ND	Field, Peroxide Strip
6	2/17/2024	4	Lead Vessel Effluent	ND	Field, Peroxide Strip
6	2/17/2024	4	Lag Vessel Effluent	ND	Field, Peroxide Strip
7	2/18/2024	3	Lead Vessel Effluent	ND	Field, Peroxide Strip
7	2/18/2024	3	Lag Vessel Effluent	ND	Field, Peroxide Strip
7	2/18/2024	4	Lead Vessel Effluent	ND	Field, Peroxide Strip
7	2/18/2024	4	Lag Vessel Effluent	ND	Field, Peroxide Strip



Table 4-16. GAC Flushing Results

7-Day Test														
Parameter	Day 1 (2/12/2024)		Day 2 (2/13/2024)		Day 3 (2/14/2024)		Day 4 (2/15/2024)		Day 5 (2/16/2024)		Day 6 (2/17/2024)		Day 7 (2/18/2024)	
	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
1,4-Dioxane ^a (µg/L)	4.8	1.7	5.6	2.6	3.9	BDLR	4.1	1.8	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Trains in Operation	2 & 3		2 & 3		1 & 2		1 & 2		3 & 4		3 & 4		3 & 4	
Train Sampled	2		2		1		1		3		4		4	
Post 7-Day Test Flushing														
Parameter	Train 1		Train 2		Train 3		Train 4							
	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag						
1,4-Dioxane ^{a,b} (µg/L)	BDLR	9.3	BDLR	3.9	BDLR	BDLR	BDLR	BDLR						

a. Analysis using method EPA 522, method reporting limit (MRL) = 1 µg/L.

b. Vessels flushed for approximately 30 hours each.

4.6.3 Documentation of System or Equipment Failures or Outages

Table 4-17 provides a summary of failures or outages related to the GAC system.

Table 4-17. Failures or Outages for the GAC System

Item	Duration	Description
GAC Train 4	Day 5	Offline on 2/16/2024 due to an influent valve requiring repair.
GAC Train 2	Day 5	Shutdown on 2/16/2024 due to high feed pressure.
GAC Trains 1, 3, and 4	Days 1-7	It was discovered on 2/18/2024 that the lead and lag vessels were unintentionally switched for Trains 1, 3, and 4, and configuration was kept as is for the entire duration of the 7-day acceptance test. Train 2 was operated as intended with the A vessel as the lead and the B vessel as the lag through the entire 7-day acceptance test. Results in the above tables have been matched appropriately.
GAC differential pressure transmitters	Days 1-7	Differential pressure readings were inaccurate throughout the 7-day acceptance test due to calibration issues. Vendor calibrated transmitters following the acceptance test period.

4.7 RO System

The RO system was monitored during the 7-day acceptance test to confirm the RO system meets design and treatment specifications. A summary of water quality and operational parameters is provided in the following sections.

4.7.1 Operational Monitoring

RO system monitoring was conducted to confirm operational systems meet specified design criteria. Different RO trains were placed online per test conditions outlined in Table 4-2 (7-day Acceptance Test Conditions). All RO trains were operated in flow reversal mode at 90 percent recovery and 1,900 gpm feed flow. For the duration of the duration of the test period, pH was above 6.6 and antiscalant (Vitec 4000) was dosed at 4.5 mg/L. The RO bypass flows were adjusted to target a finished water conductivity of approximately 300 µS/cm. Bypass flows and other monitored RO feed parameters were averaged per test condition and are presented in the Table 4-18. Note that an additional RO

bypass evaluation will be conducted following the 7-day acceptance test to analyze how various bypass flow scenarios affect final effluent water quality. Normalized data was calculated using formulas provided by the RO membrane manufacturer, Toray, with initial startup data used as the baseline condition. Normalization equations used in the TorayTrak software are listed below.

Normalized Feed Pressure

$$P_{Norm} = P_{actual} * \frac{TCF_{ref}}{TCF_{actual}}$$

Where P_{Norm} = normalized feed pressure, in psi

P_{actual} = actual feed pressure, in psi

TCF_{ref} = temperature correction factor at reference (baseline) conditions

TCF_{actual} = temperature correction factor at actual conditions

TCF is calculated using the following formula:

$$TCF = \frac{\exp\left(\frac{1965}{298.15}\right)}{\exp\left(\frac{1965}{T + 273.15}\right)} * (\exp(0.0107 * (T - 25)))$$

Where T = temperature, in °C

Normalized Permeate Flow

$$Q_{Norm} = Q_{actual} * \frac{TCF_{ref}}{TCF_{actual}} * \frac{NDP_{ref}}{NDP_{actual}}$$

Where Q_{Norm} = normalized permeate flow, in gpm

Q_{actual} = actual permeate flow, in gpm

TCF_{ref} = temperature correction factor at reference (baseline) conditions

TCF_{actual} = temperature correction factor at actual conditions

NDP_{ref} = net driving pressure at reference (baseline) conditions, in bar

NDP_{actual} = net driving pressure at actual conditions, in bar

TCF is calculated using the same formula outlined previously.

NDP is calculated using the following formula:

$$NDP = P_{feed} - \frac{P_{DP}}{2} - P_{perm} - (\pi_{feed-brine} - \pi_{perm})$$

Where P_{feed} = feed pressure, in bar

P_{DP} = overall (system) differential pressure, equal to the sum of stage 1-3 dP, in bar

P_{perm} = permeate pressure, in bar

$\pi_{feed-brine}$ = feed-brine osmotic pressure, in bar

π_{perm} = permeate osmotic pressure, in bar

Osmotic pressures (π) are calculated using the following formulas:



$$\pi = 1.0137 * 0.082504 * \frac{T + 273.15}{1000} * 10 \left(\frac{-0.5 * \left(\frac{\left(\frac{1}{2} * \left(\frac{TDS}{1000} * \frac{58.44}{2} * 1000 \right) * 4 \right)}{2000} \right) + \left(\frac{1}{2} * \left(\frac{TDS}{1000} * \frac{58.44}{2} * 1000 \right) * 4 \right)}{2000} \right)^{0.14} * \frac{TDS}{1000} * \frac{58.44}{2} * 2000$$

Where TDS = log mean average of the feed and brine TDS for feed-brine osmotic pressure and permeate TDS for permeate osmotic pressure.

Normalized Specific Flux

$$SF = \frac{Q_{perm} * \frac{1440}{(17,904.13 * 10.76)}}{P_{feed} - P_{perm}}$$

Where SF = specific flux, in gfd/psi

Q_{perm} = permeate flow, in gpm

P_{feed} = feed pressure, in psi

P_{perm} = permeate pressure, in psi

Normalized Salt Passage

$$SP_{norm} = \left(SP_{actual} * \frac{Q_{perm,actual}}{Q_{perm,ref}} * \frac{TCF_{salt,ref}}{TCF_{salt,actual}} * \frac{LM_{feed-brine,ref}}{LM_{feed-brine,actual}} * \frac{TDS_{feed,actual}}{TDS_{feed,ref}} \right) * 100\%$$

Where SP_{norm} = normalized salt passage, in %

SP_{actual} = actual salt passage, in %, calculated by dividing permeate TDS by the log mean average of the feed-brine TDS

Q_{perm, actual} = permeate flow at actual conditions, in gpm

Q_{perm, ref} = permeate flow at reference (baseline) conditions, in gpm

TCF_{salt, ref} = temperature correction factor for salts at reference condition

TCF_{salt, actual} = temperature correction factor for salts at actual condition

LM_{feed-brine, ref} = log mean average of the feed and brine TDS at reference condition

LM_{feed-brine, actual} = log mean average of the feed and brine TDS at actual condition

TDS_{feed, actual} = feed TDS at actual condition

TDS_{feed, ref} = feed TDS at reference condition

TCF_{salt} is calculated using the below formula:

$$TCF_{salt} = \exp(0.0331 * (T - 25))$$

Where T = temperature in °C



Table 4-19, Table 4-20, and Table 4-21 provide a summary of the averaged monitored system values for each respective train.

4.7.2 Water Quality Monitoring

The full suite of COPC water quality sampling was collected daily on the RO Feed (S14) and RO combined permeate (S24). Results are summarized in Table 4-22. RO feed water quality was also monitored in the field during the acceptance test period. Field analysis results and average feed water quality data are presented in Table 4-23.

1,4-Dioxane was measured in the RO feed, due to the GAC desorption from Olympic AWTF-treated water and a low concentration in the Charnock Wells source water. 1,4-Dioxane rejection by the RO membranes was approximately 90%, which exceeded the 80% rejection predicted in the Step 4 report. The 1,4-Dioxane concentration in the RO permeate was reduced to below the DLR. Additionally, TCE was measured in the RO feed contributed by the 4-15 µg/L in the Charnock WTP source water (Table 4-4). As expected, TCE is not well removed by RO, resulting in minimal to no appreciable removal in the RO permeate. Although the concentration of TCE in the Charnock WTP source water was above the values used in the initial and contingency design estimated in the Step 4 report, TCE concentrations in the finished water was reduced to below the DLR for 6 of the 7 days and below the MCL for all 7 days, as described in Section 4.9.

Table 4-18. Operational Monitoring for RO Feed System

Parameter	Monitoring Type	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)
Trains in Operation	-	3,4	2,3	2,4	2,3,4	3,4	2,4	2
Total RO Feed Flow Rate (gpm)	Online	3,800	3,800	3,800	5,700	3,800	3,800	1,900
RO Bypass Flow (gpm) ^a	Online	760	760	760	1,140	760	575	439
RO Bypass Setpoint (%)	Online	20%	20%	20%	20%	20%	15%	23%
Sulfuric Acid Pump Speed (%) ^b	Online	68%	69%	75%	26%	52%	26%	26%
Antiscalant Pump Speed (%)	Online	28%	30%	28%	44%	27%	26%	15%

a. RO Bypass setpoint is calculated as the quotient of RO bypass flow and RO feed demand on SCADA.

b. The sulfuric acid pump speeds presented here are the daily average of the VFD speeds automatically adjusted by the PLC to maintain a pH setpoint of 6.6. Note that the PLC also automatically increases pump stroke when more RO trains are placed online. Depending on the pump curve, pump speeds may not necessarily increase with more RO trains online. In addition, the required sulfuric acid pump speeds decreased following sulfuric acid dilution panel repairs on Day 3. Refer to Section 4.7.3 for more details.

gpm = gallons per minute



Table 4-19. Operational Monitoring for RO System – Train 2

Parameter	Monitoring Type	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)
Train in Operation	Online	Train 2 offline	Train 2 online	Train 2 online	Train 2 online	Train 2 offline	Train 2 online	Train 2 online
RO Feed Flow Rate (gpm)	Online	--	1,900	1,900	1,901	--	1,900	1,900
RO Permeate Flow Rate (gpm)	Online	--	1,710	1,710	1,711	--	1,710	1,710
RO Concentrate Flow (gpm)	Online	--	190	190	190	--	190	190
Recovery (%)	Online	--	90%	90%	90%	--	90%	90%
Stage 1 dP (psi)	Online	--	18	18	18	--	18	18
Stage 2 dP (psi)	Online	--	13	13	13	--	13	13
Stage 3 dP (psi)	Online	--	15	15	15	--	15	15
Membrane Flux -Stage 1 (gfd)	Online	--	13	13	13	--	13	13
Membrane Flux -Stage 2 (gfd)	Online	--	13	13	13	--	13	13
Membrane Flux -Stage 3 (gfd)	Online	--	11	11	11	--	11	11
Normalized Feed Pressure (psi) ^a	Calculated - Average	--	133	135	137	--	138	141
Normalized Permeate Flow (gpm) ^a	Calculated - Average	--	872	845	823	--	797	756
Normalized Specific Flux (gfd/psi) ^a	Calculated - Average	--	0.11	0.10	0.10	--	0.10	0.10
Normalized Salt Passage (%) ^a	Calculated - Average	--	0.70%	0.70%	0.63%	--	0.52%	0.67%

a. Normalized calculations were performed using TorayTrak, a publicly available normalization software for Toray RO membranes. <https://www.water.toray/knowledge/tool/trak/>. Note that the baseline used is the average of the initial startup data for each respective RO Train.

gpm = gallons per minute

dP = differential pressure

psi = pounds per square inch

gfd = gallons per day per square foot



Table 4-20. Operational Monitoring for RO System – Train 3

Parameter	Monitoring Type	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)
Train in Operation	Online	Train 3 online	Train 3 online	Train 3 offline	Train 3 online	Train 3 online	Train 3 offline	Train 3 offline
RO Feed Flow Rate (gpm)	Online	1,900	1,900	--	1,900	1,900	--	--
RO Permeate Flow Rate (gpm)	Online	1,710	1,710	--	1,711	1,710	--	--
RO Concentrate Flow (gpm)	Online	190	190	--	190	190	--	--
Recovery (%)	Online	90%	90%	--	90%	90%	--	--
Stage 1 dP (psi)	Online	17	17	--	17	17	--	--
Stage 2 dP (psi)	Online	15	15	--	15	15	--	--
Stage 3 dP (psi)	Online	15	15	--	15	15	--	--
Membrane Flux -Stage 1 (gfd)	Online	13	13	--	13	13	--	--
Membrane Flux -Stage 2 (gfd)	Online	13	13	--	13	13	--	--
Membrane Flux -Stage 3 (gfd)	Online	11	11	--	11	11	--	--
Normalized Feed Pressure (psi) ^a	Calculated - Average	125	126	--	129	129	--	--
Normalized Permeate Flow (gpm) ^a	Calculated - Average	1,608	1,593	--	1,530	1,498	--	--
Normalized Specific Flux (gfd/psi) ^a	Calculated - Average	0.11	0.11	--	0.11	0.11	--	--
Normalized Salt Passage (%) ^a	Calculated - Average	0.57%	0.56%	--	0.51%	0.51%	--	--

a. Normalized calculations were performed using TorayTrak, a publicly available normalization software for Toray RO membranes. <https://www.water.toray/knowledge/tool/trak/>. Note that the baseline used is the average of the initial startup data for each respective RO Train.

gpm = gallons per minute

dP = differential pressure

psi = pounds per square inch

gfd = gallons per day per square foot



Table 4-21. Operational Monitoring for RO System - Train 4

Parameter	Monitoring Type	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)
Train in Operation	Online	Train 4 online	Train 4 offline	Train 4 online	Train 4 online	Train 4 online	Train 4 online	Train 4 offline
RO Feed Flow Rate (gpm)	Online	1,900	--	1,901	1,900	1,900	1,900	--
RO Permeate Flow Rate (gpm)	Online	1,710	--	1,711	1,710	1,710	1,710	--
RO Concentrate Flow (gpm)	Online	190	--	190	190	190	190	--
Recovery (%)	Online	90%	--	90%	90%	90%	90%	--
Stage 1 dP (psi)	Online	17	--	17	17	17	17	--
Stage 2 dP (psi)	Online	15	--	15	15	15	15	--
Stage 3 dP (psi)	Online	16	--	16	16	16	16	--
Membrane Flux -Stage 1 (gfd)	Online	13	--	13	13	13	13	--
Membrane Flux -Stage 2 (gfd)	Online	13	--	13	13	13	13	--
Membrane Flux -Stage 3 (gfd)	Online	11	--	11	11	11	11	--
Normalized Feed Pressure (psi) ^a	Calculated - Average	129	--	129	130	130	130	--
Normalized Permeate Flow (gpm) ^a	Calculated - Average	1,326	--	1,316	1,290	1,264	1,243	--
Normalized Specific Flux (gfd/psi) ^a	Calculated - Average	0.11	--	0.11	0.11	0.11	0.11	--
Normalized Salt Passage (%) ^a	Calculated - Average	0.48%	--	0.44%	0.41%	0.42%	0.43%	--

a. Normalized calculations were performed using TorayTrak, a publicly available normalization software for Toray RO membranes. <https://www.water.toray/knowledge/tool/trak/>. Note that the baseline used is the average of the initial startup data for each respective RO Train.

gpm = gallons per minute

dP = differential pressure

psi = pounds per square inch

gfd = gallons per day per square foot



Table 4-22. 7-Day Acceptance Test RO System COPCs

Parameter	Method	Unit	MDL	MRL	Day 1 (2/12/2024)		Day 2 (2/13/2024)		Day 3 (2/15/2024)		Day 4 (2/15/2024)		Day 5 (2/16/2024)		Day 6 ^a (2/17/2024)		Day 7 (2/18/2024)	
					Feed (S14)	Permeate (S24)	Feed (S14)	Permeate (S24)	Feed (S14)	Permeate (S24)	Feed (S14)	Permeate (S24)	Feed (S14)	Permeate (S24)	Feed (S14)	Permeate (S24)	Feed (S14)	Permeate (S24)
1,1-DCA	EPA 524.2	µg/L	0.27	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,1-DCE	EPA 524.2	µg/L	0.16	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2,3-TCP	SRL 524M-TCP	µg/L	0.0012	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,4-Dioxane	EPA 522	µg/L	0.028	1 ^b	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	1.3	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Carbon Tetrachloride	EPA 524.2	µg/L	0.27	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Cis-1,2-DCE	EPA 524.2	µg/L	0.25	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PCE	EPA 524.2	µg/L	0.18	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
TCE	EPA 524.2	µg/L	0.18	0.5	3.3	4.5	3.4	2.7	5.2	2.9	1.7	2.8	3.9	2.6	5.1	2.2	5.7	3.3
1,1,2-Trichloroethane	EPA 524.2	µg/L	0.19	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2-Dichloroethane	EPA 524.2	µg/L	0.24	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Benzene	EPA 524.2	µg/L	0.15	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
MTBE	EPA 524.2	µg/L	0.94	3.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PFOA	EPA 537.1	ng/L	0.6	4.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.26	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Vinyl Chloride	EPA 524.2	µg/L	0.18	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR

a. Duplicate samples were collected during Day 6. Results shown are an average of reported concentrations.

b. Recommended by the State Board; there is no official California DLR for 1,4-dioxane.

BDLR – sample result was below the DLR.

This page intentionally left blank.



Table 4-23. Online Feed Water Quality Data and Field Analysis Results for RO System

Parameter	Monitoring Type	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)
RO Feed SDI (S14)	Field Analysis	1.38	1.55	1.42	1.45	1.31	-.b	-.b
RO Feed ORP (M) [eV]	Online	565	578	576	575	573	561	571
RO Feed Turbidity (M) [NTU]	Online	0.099	0.078	0.096	0.057	0.063	0.062	0.060
RO Feed Ammonia Residual (K) [mg/L] ^a	Online	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RO Feed Chloramine Residual (K, N) [mg/L] ^a	Online	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RO Feed Chlorine to Ammonia, N Ratio (K) [mg/L] ^a	Online	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RO Feed Temperature(N) [°F]	Online	45.5	45.0	45.3	45.2	45.6	45.4	45.4
RO Feed pH (M)	Online	6.6	6.6	6.6	6.7	6.6	6.6	6.6
RO Feed Conductivity (M) [µS/cm]	Online	1,394	1,459	1,457	1,452	1,427	1,393	1,440
RO Feed Free Chlorine Residual (M) [mg/L]	Online	0.83	0.85	0.82	0.77	0.76	0.62	0.59

a. Monochloramine, ammonia, and chlorine-to-ammonia ratio readings were not available at location K due to unavailability of analyzer reagents. Chloramine residual is provided at location N.

b. Field tests were not conducted on Days 6 and 7 due to staffing availability from Brown and Caldwell.

4.7.3 Documentation of System or Equipment Failures or Outages

Table 4-24 provides a summary of failures or outages related to the RO system.

Table 4-24. Failures or Outages for the RO System

Item	Duration	Description
All online RO trains	Day 3	RO system was automatically shut down six times due to programmed shutdown conditions, including high pH, for a total of 2.5 hours of downtime. The RO system was manually shut down for an additional hour on the same day to troubleshoot and repair issues relating to pH controls. It was discovered that the sulfuric acid dilution panel static mixer had mechanical issues, impeding sulfuric acid flow to the RO feed injection. Short-term repairs were completed, and dilution flows were also adjusted to help stabilize pH controls.
All online RO trains	Day 4	Following completion of the Day 4 test condition sampling on 2/15/24, the RO system was manually shut down for an additional 2 hours to allow the Contractor to complete permanent repairs on the sulfuric acid dilution panel static mixer. Following repairs, RO feed pH was stable throughout the remaining duration of the acceptance test period.
High-Pressure RO Feed Pump 4	Day 7	The variable-frequency drive (VFD) on the existing High-Pressure RO Feed Pump 4 faulted, and RO Train 4 was unable to be turned on. Repairs were completed the next day. This did not affect the Day 7 test conditions since the test condition only required one RO train to be online. RO Train 2 was subsequently placed online at the same flow and recovery rate for sampling.
RO Feed Tank Monochloramine and Ammonia Analyzer	Days 1-7	Not functional for the acceptance test due to insufficient reagent levels. Reagents were purchased and replaced following the acceptance test period. Total chlorine analyzers were used to monitor chloramine residuals.

4.8 Decarbonation System

The decarbonation system was monitored during the 7-day acceptance test to document the system operating conditions. Water quality samples were collected at the decarbonator effluent to document treatment performance. A summary of operational and water quality parameters is provided in the following subsections.

4.8.1 Operational Monitoring

The decarbonation system was monitored to document operational conditions. Monitored parameters are summarized in Table 4-25.

Table 4-25. Operational Monitoring for Decarbonation System								
Parameter	Monitoring Type	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)
Trains in Operation	Field Reading	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Flow Rate (gpm)	Online	4,232	4,121	3,563	5,630	4,272	4,193	2,174
Liquid Loading Rate (gpm/ft ²)	Calculation	22.3	21.7	18.8	29.7	22.5	22.1	11.5
Blower Speed (rpm) ^a	Field Reading	2,295	2,295	2,295	2,295	2,295	2,295	2,295

a. Blowers on SCADA do not quantify speed and read as a running status with only TRUE or FALSE outputs.

4.8.2 Water Quality Monitoring

The full suite of COPC water quality sampling was collected daily on the decarbonator influent (S18) and decarbonator effluent (S19). Results are summarized in Table 4-26. All COPCs were below the DLR in the decarbonator feed, except for TCE at 2.7 to 4.4 µg/L. The decarbonator reduced TCE to below the reporting limit for all test conditions, except for Day 1 at 0.57µg/L, which is well below the MCL of 5 µg/L.

Table 4-26. 7-Day Acceptance Test Decarbonator COPCs																	
Parameter	Method	Unit	DLR	Day 1 (2/12/2024)		Day 2 (2/13/2024)		Day 3 (2/15/2024)		Day 4 (2/15/2024)		Day 5 (2/16/2024)		Day 6 (2/17/2024)		Day 7 (2/18/2024)	
				Feed (S18)	Effluent (S19)	Feed (S18)	Effluent (S19)	Feed (S18)	Effluent (S19)	Feed (S18)	Effluent (S19)	Feed (S18)	Effluent (S19)	Feed (S18)	Effluent (S19)	Feed (S18)	Effluent (S19)
1,1-DCA	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,1-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2,3-TCP	SRL 524M-TCP	µg/L	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,4-dioxane	EPA 522	µg/L	1 ^a	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Carbon Tetrachloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Cis-1,2-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
TCE	EPA 524.2	µg/L	0.5	4.4	0.57	2.7	BDLR	3.0	BDLR	2.8	BDLR	3.0	BDLR	2.7	BDLR	4.0	BDLR
1,1,2-Trichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
1,2-Dichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Benzene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
MTBE	EPA 524.2	µg/L	3.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
PFOA	EPA 537.1	ng/L	4.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Vinyl Chloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR

a. Recommended by the State Board; there is no official California DLR for 1,4-dioxane.
 BDLR – sample result was below the DLR.

This page intentionally left blank.



4.8.3 Documentation of System or Equipment Failures or Outages

Table 4-27 provides a summary of failures or outages related to the decarbonation system.

Table 4-27. Failures or Outages for the Decarbonation System		
Item	Duration	Description
Decarbonator Train 3	Days 1-7	Out of service for the duration of the 7-day acceptance test pending Air Quality Management District permit to place the train into service. Trains 1 and 2 were sufficient to produce finished water for all test conditions.

4.9 Arcadia WTP Final Effluent

The Arcadia WTP final effluent water quality was monitored daily for each test condition to confirm final water quality requirements were met. Water quality samples were collected post-Arcadia reservoir (S22). Water quality parameters included COPCs, background water quality, and all applicable DDW drinking water standards.

4.9.1 Water Quality Monitoring

The full suite of COPC water quality sampling, background water quality, and DDW drinking water standards was collected daily at the finished water (S22). Results are summarized in Table 4-28 through . Background water quality, COPCs, secondary drinking water standards, and compounds with notification levels are reported to their method reporting limits (Table 4-28, ,). DDW regulated compounds are reported to the DLR for the purpose of compliance reporting (Table 4-29, Table 4-30, , , ,).

Additional onsite water quality samples were collected and analyzed daily to confirm treatment performance. A summary of finished water quality is provided in Table 4-36.

This page intentionally left blank.



Table 4-28. 7-day Acceptance Test Arcadia WTP Finished Water - Background Water Quality and COPCs

Group	Parameter	Method	Unit	DLR	Day 1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/15/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24) ^a
COPCs	1,1-DCA	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2,3-TCP	SRL 524M-TCP	µg/L	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,4-Dioxane	EPA 522	µg/L	1 ^a	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Carbon Tetrachloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Cis-1,2-DCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	PCE	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	TCE	EPA 524.2	µg/L	0.5	0.54	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1,2-Trichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2-Dichloroethane	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Benzene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	MTBE	EPA 524.2	µg/L	2	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	PFOA	EPA 537.1	ng/L	1.8	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	trans-1,2-Dichloroethene	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Vinyl Chloride	EPA 524.2	µg/L	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
MCLeq					0.11	0.0	0.0	0.0	0.0	0.0	0.0

a. Recommended by the State Board; there is no official California DLR for 1,4-dioxane.
 BMRL – sample result was below the method reporting limit.

Table 4-29. 7-day Acceptance Test Arcadia WTP Finished Water - Organic Chemicals

Group	Parameter	Method	Unit	DLR	MCL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
Organic Chemicals	Benzene	EPA 524.2	mg/L	0.0005	0.001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Carbon Tetrachloride	EPA 524.2	mg/L	0.0005	0.0005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2-Dichlorobenzene	EPA 524.2	mg/L	0.0005	0.6	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,4-Dichlorobenzene	EPA 524.2	mg/L	0.0005	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1-Dichloroethane	EPA 524.2	mg/L	0.0005	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2-Dichloroethane	EPA 524.2	mg/L	0.0005	0.0005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1-Dichloroethylene	EPA 524.2	mg/L	0.0005	0.006	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	cis-1,2-Dichloroethylene	EPA 524.2	mg/L	0.0005	0.006	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	trans-1,2-Dichloroethylene	EPA 524.2	mg/L	0.0005	0.01	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Dichloromethane	EPA 524.2	mg/L	0.0005	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2-Dichloropropane	EPA 524.2	mg/L	0.0005	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,3-Dichloropropene	EPA 524.2	mg/L	0.0005	0.0005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Ethylbenzene	EPA 524.2	mg/L	0.0005	0.3	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	MTBE	EPA 524.2	mg/L	0.003	0.013	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Monochlorobenzene	EPA 524.2	mg/L	0.0005	0.07	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Styrene	EPA 524.2	mg/L	0.0005	0.1	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1,2,2-Tetrachloroethane	EPA 524.2	mg/L	0.0005	0.001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Tetrachloroethylene	EPA 524.2	mg/L	0.0005	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Toluene	EPA 524.2	mg/L	0.0005	0.15	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2,4-Trichlorobenzene	EPA 524.2	mg/L	0.0005	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1,1-Trichloroethane	EPA 524.2	mg/L	0.0005	0.2	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1,2-Trichloroethane	EPA 524.2	mg/L	0.0005	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Trichloroethylene	EPA 524.2	mg/L	0.0005	0.005	0.00054	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Trichlorofluoromethane	EPA 524.2	mg/L	0.005	0.15	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 524.2	mg/L	0.01	1.2	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Vinyl Chloride	EPA 524.2	mg/L	0.0005	0.0005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Xylenes	EPA 524.2	mg/L	0.0005	1.75	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Alachlor	EPA 525.2	mg/L	0.001	0.002	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Atrazine	EPA 525.2	mg/L	0.0005	0.001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Bentazon	EPA 515.4	mg/L	0.002	0.018	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Benzo(a)pyrene	EPA 525.2	mg/L	0.0001	0.0002	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	
Carbofuran	EPA 531.2	mg/L	0.005	0.018	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	
Chlordane	EPA 508	mg/L	0.0001	0.0001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	
2,4-D	EPA 515.4	mg/L	0.01	0.2	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	
Dalapon	EPA 515.4	mg/L	0.01	0.0002	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	
Dibromochloropropane	EPA 524.3	mg/L	0.00001	0.07	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	



Table 4-29. 7-day Acceptance Test Arcadia WTP Finished Water - Organic Chemicals

Group	Parameter	Method	Unit	DLR	MCL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
	Di(2-ethylhexyl)adipate	EPA 525.2	mg/L	0.005	0.4	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Di(2-ethylhexyl)phthalate	EPA 525.2	mg/L	0.003	0.004	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Dinoseb	EPA 515.4	mg/L	0.002	0.007	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Diquat	EPA 549.2	mg/L	0.004	0.02	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Endothall	EPA 548.1	mg/L	0.045	0.1	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Endrin	EPA 508	mg/L	0.0001	0.002	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Ethylene Dibromide	EPA 504.1	mg/L	0.00002	0.00005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Glyphosate	EPA 547	mg/L	0.025	0.7	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Heptachlor	EPA 508	mg/L	0.00001	0.00001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Heptachlor Epoxide	EPA 508	mg/L	0.00001	0.00001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Hexachlorobenzene	EPA 508	mg/L	0.0005	0.001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Hexachlorocyclopentadiene	EPA 508	mg/L	0.001	0.05	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Lindane	EPA 508	mg/L	0.0002	0.0002	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Methoxychlor	EPA 508	mg/L	0.01	0.03	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Molinate	EPA 525.2	mg/L	0.002	0.02	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Oxamyl	EPA 531.2	mg/L	0.02	0.05	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Pentachlorophenol	EPA 515.4	mg/L	0.0002	0.001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Picloram	EPA 515.4	mg/L	0.001	0.5	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Polychlorinated Biphenyls	EPA 508	mg/L	0.0005	0.0005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Simazine	EPA 525.2	mg/L	0.001	0.004	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Thiobencarb	EPA 525.2	mg/L	0.001	0.07	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Toxaphene	EPA 508	mg/L	0.001	0.003	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	1,2,3-Trichloropropane	SRL 524M-TCP	mg/L	0.000005	0.000005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	2,3,7,8-TCDD (Dioxin)	EPA 1613B	mg/L	0.005	3 x 10 ⁻⁸	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	2,4,5-TP (Silvex)	EPA 515.4	mg/L	0.001	0.05	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR

BDRL - sample result was below the detection limits for the purpose of reporting.



Table 4-30. Day Acceptance Test Arcadia WTP Finished Water - Radionuclide Chemicals												
Group	Parameter	Method	Unit	DRL	MCL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
Radionuclide Chemicals	Radium-226	EPA 903.1	pCi/L	1	--	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL
	Radium-228	EPA 904	pCi/L	1	--	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL
	Radium-226 + Radium-228	--	pCi/L	1	5	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL
	Gross alpha particle activity	EPA 900.0	pCi/L	3	15	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL
	Uranium	EPA 200.8	pCi/L	1	20	1.94	1.74	1.60	1.21	1.61	1.41	1.88
	Beta/photon emitters	EPA 900.0	pCi/L	4	4	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL
	Strontium-90	EPA 905.0	pCi/L	2	8	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL
	Tritium	EPA 906.0	pCi/L	1,000	20,000	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL	BDRL

a. MDL ranged per sample. The lowest MDL is presented in the table. See MDL for each sample in the reports
 BDRL - sample result was below the detection limits for the purpose of reporting.
 DLR = California state water board detection limits for purpose of reporting
 NR = not reported by analytical laboratory
 pCi/L = picocuries per liter

Table 4-31. 7-Day Acceptance Test Arcadia WTP Finished Water – Inorganic Chemicals														
Group	Parameter	Method	Unit	Laboratory		State		Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
				MDL	MRL	DLR	MCL							
Inorganic Chemicals	Aluminum	EPA 200.8	mg/L	0.0044	0.02	0.05	1	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Antimony	EPA 200.8	mg/L	0.000089	0.0005	0.006	0.006	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Arsenic	EPA 200.8	mg/L	0.000074	0.0004	0.002	0.01	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Asbestos	EPA 100.2	MFL	0.2	0.2	0.2	7	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Barium	EPA 200.8	mg/L	0.00014	0.001	0.1	1	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Beryllium	EPA 200.8	mg/L	0.000029	0.0001	0.001	0.004	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Cadmium	EPA 200.8	mg/L	0.000042	0.0002	0.001	0.005	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Chromium	EPA 200.8	mg/L	0.000089	0.0002	0.001	0.05	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Cyanide	EPA335.4	mg/L	0.0015	0.005	0.1	0.15	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Fluoride	EPA 300.0	mg/L	0.009	0.1	1	2	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Hexavalent chromium	EPA 218.6	mg/L	0.0000079	0.00002	--	--	Not Analyzed ^a	Not Analyzed ^a	Not Analyzed ^a	Not Analyzed ^a	Not Analyzed ^a	Not Analyzed ^a	Not Analyzed ^a
	Mercury	EPA 245.1	mg/L	0.000037	0.00005	0.001	0.002	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Nickel	EPA 200.8	mg/L	0.0004	0.002	0.01	0.1	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Nitrate (as N)	EPA 353.2	mg/L as N	0.04	0.2	0.4	10	0.50	0.46	0.46	BDLR	0.48	0.63	0.94
	Nitrate+Nitrite	EPA 353.2	mg/L as N	0.04	0.1	0.4	10	0.50	0.46	0.46	BDLR	0.48	0.63	0.94
	Nitrite (as N)	EPA 353.2	mg/L as N	0.042	0.1	0.4	1	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Perchlorate	EPA314	mg/L	0.00026	0.001	0.002	0.006	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
Selenium	EPA 200.8	mg/L	0.000067	0.0004	0.005	0.05	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	
Thallium	EPA 200.8	mg/L	0.000021	0.0002	0.001	0.002	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	

a. Samples were not analyzed by the external laboratory, due to an internal miscommunication which led to the laboratory discarding collected samples. Hexavalent chromium concentrations for Olympic wells during the Performance Test are available in Table 2-4. Source water hexavalent chromium concentrations are low ranging from 0.00028-0.00089 mg/L and are not a contaminant of concern. Additional hexavalent chromium samples will be collected following permit amendment approval.

H – analysis was performed outside the EPA recommended hold time.

MFL = million fibers per liter

Table 4-32. 7-Day Acceptance Test Arcadia WTP Finished Water – Disinfection Byproducts

Group	Parameter	Method	Unit	DLR	MCL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
Disinfection Byproducts	Bromodichloromethane	EPA 524.2	mg/L	0.001	--	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Bromoform	EPA 524.2	mg/L	0.001	--	0.0051	0.0033	0.0033	BDLR	0.004	0.0034	0.0026
	Chloroform	EPA 524.2	mg/L	0.001	--	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Dibromochloromethane	EPA 524.2	mg/L	0.001	--	0.0013	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Total Trihalomethane (TTHM)	EPA 524.2	mg/L	--	0.080	0.0064	0.0033	0.0033	BDLR	0.0040	0.0034	0.0026
	Monochloroacetic Acid	EPA 552.3	mg/L	0.002	--	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Dichloroacetic Acid	EPA 552.3	mg/L	0.001	--	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Trichloroacetic Acid	EPA 552.3	mg/L	0.001	--	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Monobromoacetic Acid	EPA 552.3	mg/L	0.001	--	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Dibromoacetic Acid	EPA 552.3	mg/L	0.001	--	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Haloacetic Acids (HAA5)	EPA 552.3	mg/L	--	0.060	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Bromate	EPA 300.1	mg/L	0.005	0.010	BDLR	BDLR	BDLR	BDLR	Not Analyzed ^a	BDLR	BDLR
	Chlorite	EPA 300.1	mg/L	0.02	1.0	BDLR	BDLR	BDLR	BDLR	Not Analyzed ^a	BDLR	BDLR

a. Samples were not analyzed by the external laboratory, due to an internal miscommunication which led to the laboratory discarding collected samples.

Table 4-33. 7-Day Acceptance Test Arcadia WTP Finished Water – Lead and Copper

Group	Parameter	Method	Unit	DLR	AL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
Lead and Copper	Lead	EPA 200.8	mg/L	0.05	1.3	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Copper	EPA 200.8	mg/L	0.005	0.015	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR

Table 4-34. 7-Day Acceptance Test Arcadia WTP Finished Water – Secondary Drinking Water Standards

Group	Parameter	Method	Unit	DLR	SMCL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
Secondary Drinking Water Standards	Aluminum	EPA 200.8	mg/L	0.05	0.2	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Color	SM2120B	Color Number	--	15	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Copper	EPA 200.8	mg/L	0.05	1.0	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Iron	EPA 200.7	mg/L	--	0.3	0.0054	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Manganese	EPA 200.8	mg/L	--	0.05	0.00033	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	MTBE	EPA 524.2	mg/L	0.003	0.005	BDLR	BDLR	BDLR	BDLR	BMRL	BDLR	BDLR
	Odor - Threshold	EPA 140.1	Units	--	3	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Silver	EPA 200.8	mg/L	--	0.1	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Thiobencarb	EPA 525.2	mg/L	0.001	0.001	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR	BDLR
	Turbidity	Field	NTU	--	5	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Zinc	EPA 200.8	mg/L	--	5	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL

CACL = consumer acceptance contaminant levels



Table 4-35. 7-Day Acceptance Test Arcadia WTP Finished Water – Notification Levels

Group	Parameter	Method	Unit	MRL	NL	Day 1 (2/12/2024)	Day 2 (2/13/2024)	Day 3 (2/15/2024)	Day 4 (2/15/2024)	Day 5 (2/16/2024)	Day 6 (2/17/2024)	Day 7 (2/18/2024)
Notification Levels	Boron	EPA 200.7	µg/L	10	1,000	130	140	120	130	120	80	78
	n-Butylbenzene	EPA 524.2	µg/L	0.5	260	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	sec-Butylbenzene	EPA 524.2	µg/L	0.5	260	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	tert-Butylbenzene	EPA 524.2	µg/L	0.5	260	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Carbon disulfide	EPA 524.2	µg/L	0.5	160	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Chlorate	EPA 300.1	µg/L	5	800	280	270	190	170	Not Analyzed ^a	140	150
	2-Chlorotoluene	EPA 524.2	µg/L	0.5	140	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	4-Chlorotoluene	EPA 524.2	µg/L	0.5	140	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Diazinon	EPA 525.2	µg/L	0.1	1.2	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Dichlorodifluoromethane (Freon 12)	EPA 524.2	µg/L	0.5	1,000	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Ethylene glycol	EPA 8015	mg/L	10	14,000	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Formaldehyde	EPA 556	µg/L	2.0	100	10	8.7 H	9.6	BMRL	9.7	12	12
	HMX	EPA 8330	µg/L	1.0	350	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Isopropylbenzene	EPA 524.2	µg/L	0.5	770	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Manganese	EPA 200.8	µg/L	1.0	500	0.33	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Methyl isobutyl ketone (MIBK)	EPA 524.2	µg/L	5.0	120	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Naphthalene	EPA 524.2	µg/L	0.5	17	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	N-Nitrosodiethylamine (NDEA)	EPA 521	µg/L	2.0	0.010	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	N-Nitrosodimethylamine (NDMA)	EPA 521	µg/L	2.0	0.010	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	N-Nitrosodi-n-propylamine (NDPA)	EPA 521	µg/L	2.0	0.010	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Perfluorobutanesulfonic acid (PFBS)	EPA 537.1	ng/L	2.0	500	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL H
	Perfluorooctanoic acid (PFOA)	EPA 537.1	ng/L	2.0	3.0	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL H
	Perfluorooctanesulfonic acid (PFOS)	EPA 537.1	ng/L	2.0	5.1	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL H
	Perfluorohexane sulfonic acid (PFHxS)	EPA 537.1	ng/L	2.0	6.5	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL H
	Propachlor	EPA 508	µg/L	0.2	90	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	n-Propylbenzene	EPA 524.2	µg/L	0.5	260	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	RDX	EPA 8330	µg/L	1.0	0.30	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL
	Tertiary butyl alcohol (TBA)	EPA 524.2	µg/L	2.0	12	Not Analyzed ^a	Not Analyzed ^a	Not Analyzed ^a	Not Analyzed ^a	BMRL	Not Analyzed ^a	Not Analyzed ^a
1,2,4-Trimethylbenzene	EPA 524.2	µg/L	0.5	330	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	
1,3,5-Trimethylbenzene	EPA 524.2	µg/L	0.5	330	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	
2,4,6-Trinitrotoluene (TNT)	EPA 8330	µg/L	1.0	1.0	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	
Vanadium	EPA 200.8	µg/L	0.5	50	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	

a. Samples were not analyzed by the external laboratory, due to an internal miscommunication which led to the laboratory discarding collected samples. The analyzed TBA sample on Day 5 was BMRL. Additional TBA samples will be collected following permit amendment approval.

Table 4-36. Additional Field and Online Monitor Water Quality for Finished Water

Parameter	Monitoring Type	Day1 (2/12/24)	Day 2 (2/13/24)	Day 3 (2/14/24)	Day 4 (2/15/24)	Day 5 (2/16/24)	Day 6 (2/17/24)	Day 7 (2/18/24)
Turbidity (NTU)	Grab	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Temperature (deg F)	Field Reading	72.0	72.3	72.1	72.1	72.4	72.1	72.1
Conductivity (us/cm)	Grab	416	376	356	292	345	287	353
Total Chlorine Residual (mg/L)	Grab	4.59	3.86	4.14	3.98	3.97	3.91	3.84
pH (S.U.)	Grab	8.4	8.4	8.6	8.3	8.5	8.7	8.8
Fluoride (mg/L)	Field Reading	0.82	0.82	0.86	0.82	0.83	0.82	0.83
Ammonia Residual (mg/L)	Field Reading	--	--	--	--	--	--	--
Monochloramine Residual (mg/L)	Field Reading	--	--	--	--	--	--	--

Table 4-37. Arcadia WTP COPCs Treated Water Quality Performance Parameters (Exhibit 6, Table 3)

Parameter	Proposed WTP Effluent Goal (mg/L)	MCL/NL (mg/L)	Treated Water Concentration Fraction of MCL/NL								Notes
			Target	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
1,4-Dioxane	< 0.0005	0.001	0.000/0.001	0.000/0.001	0.000/0.001	0.000/0.001	0.000/0.001	0.000/0.001	0.000/0.001	0.000/0.001	Achieved
TCE	< 0.0005	0.005	0.000/0.005	0.00054/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	Achieved 6 out of 7 days
PCE	< 0.0005	0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	Achieved
1,2,3-TCP	No change	0.000005	0.000000/0.000005	0.000000/0.000005	0.000000/0.000005	0.000000/0.000005	0.000000/0.000005	0.000000/0.000005	0.000000/0.000005	0.000000/0.000005	Achieved
1,1,1-DCE	< 0.0005	0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	Achieved
1,1,1-DCA	No change	0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	Achieved
Cis-1,2-DCE	< 0.0005	0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	0.000/0.006	Achieved
Carbon Tetrachloride	No change	0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	0.000/0.005	Achieved
PFOA [ng/L]	No change	5.1	0.0/5.1	0.0/5.1	0.0/5.1	0.0/5.1	0.0/5.1	0.0/5.1	0.0/5.1	0.0/5.1	Achieved
1,1,2-Trichloroethane [µg/L]	No change	5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	Achieved
1,2-Dichloroethane [µg/L]	No change	0.5	0/0.5	0/0.5	0/0.5	0/0.5	0/0.5	0/0.5	0/0.5	0/0.5	Achieved
Benzene [µg/L]	No change	1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	Achieved
Methyl tert-butyl ether	No change	13	0/13	0/13	0/13	0/13	0/13	0/13	0/13	0/13	Achieved
(MTBE) [µg/L]	No change	10	0/10	0/10	0/10	0/10	0/10	0/10	0/10	0/10	Achieved
trans-1,2-Dichloroethene [µg/L]	No change	0.5	0/0.5	0/0.5	0/0.5	0/0.5	0/0.5	0/0.5	0/0.5	0/0.5	Achieved
Vinyl Chloride [µg/L]	No change	0.001	0/0.001	0/0.001	0/0.001	0/0.001	0/0.001	0/0.001	0/0.001	0/0.001	Achieved

Table 4-38. Arcadia WTP Inorganic Treated Water Quality Performance Parameters (Exhibit 6, Table 4)

Parameter	Average Treated Water Quality Target	MCL, NL, sMCL								Notes
			Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
Flow, Ultimate (gpm)	7,030	-	4,180	4,180	4,180	5,871	4,180	4,180	2,090	*Limited by available Olympic well supply
pH	8.3	-	8.4	8.4	8.6	8.3	8.5	8.7	8.8	Day 6 and 7 were above target.
Temperature (°C)	20	-	22	22	22	22	22	22	22	-
Total Dissolved Solids (TDS) (mg/L)	367	500	240	210	190	150	190	160	200	Achieved
Alkalinity (mg/L as CaCO3)	97	-	97	96	84	63	84	71	86	-
Hardness (mg/L as CaCO3)	165	-	133	117	116	84.3	108	82.3	106	-
Aluminum, Total (mg/L)	0.0014	0.2	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	Achieved
Copper (mg/L)	ND	1	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	Achieved
Barium (mg/L)	0.02	1	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	Achieved
Calcium (mg/L)	39.3	-	31.7	27.9	27.7	20.2	25.7	19.4	24.9	-
Iron, Total (mg/L)	0.01	0.3 (dissolved)	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	Achieved
Lead (mg/L)	ND	0.015	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	Achieved
Magnesium, Total (mg/L)	16	-	13.2	11.6	11.4	8.23	10.7	8.24	10.6	-
Manganese (mg/L)	0.01	0.05	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	Achieved
Potassium (mg/L)	0.85	-	0.84	0.77	0.73	0.57	0.76	0.63	0.75	-
Arsenic (mg/L)	ND	0.01	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	BMRL	Achieved
Chloride (mg/L)	37.8	250	35	34	30	24	30	25	30	Achieved
Fluoride (mg/L)	0.1 ^a	2	0.75	0.74	0.75	0.75	0.78	0.75	0.83	Achieved
Sulfate (mg/L)	101	250	74	68	62	46	61	45	55	Achieved
Nitrate (mg/L as N)	0.1	10	0.5	0.46	0.46	0.34	0.48	0.63	0.94	Achieved
Selenium (µg/L)	ND	0.05	0.00044	0.0004	0.0004	BMRL	0.00042	0.0005	0.00066	Achieved
Silica (mg/L)	12	-	9.4	8.1	8.5	6.2	7.8	6.4	8.2	-

a. City target fluoride concentration prior to chemical injection.

Table 4-39. Arcadia WTP Major Effluent Water Quality Performance Parameters (Exhibit 6, Table 5)

Parameter	Target Value	Range								Notes
			Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
pH	8.3	8.0 to 8.5	8.4	8.4	8.6	8.3	8.5	8.7	8.8	pH exceeded target finished water pH on three days (Day 3, Day 6, Day 7). Additional RO bypass evaluations will be conducted to achieve target values.
TDS (Final Effluent)	400	350 to 500	240	210	190	150	190	160	200	Final effluent TDS was below the target TDS value. Additional RO bypass evaluations will be conducted to achieve target values.
TDS (RO Permeate)	< 120	-	-	-	-	-	-	-	-	TDS was not analyzed at RO permeate during the 7-day acceptance test. TDS results from the FRRO performance test ranged from 17 – 34 mg/L in the RO permeate (Table 3-5).
Turbidity (NTU)	< 0.2	0.1 to 0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Turbidity target was achieved.
Alkalinity (mg/L as CaCO ₃)	100	75 to 150	97	96	84	63	84	71	86	Day 4 and 6 alkalinity was below target value. Additional RO bypass evaluations will be conducted to achieve target values.
Fluoride (mg/L)	1.0	0.5 to 1.0	0.82	0.82	0.86	0.82	0.83	0.82	0.83	Fluoride target was achieved.
LSI (20 C)	0.0	-1.0 to 1.0	0.4	0.4	0.5	0.0	0.4	0.4	0.7	Achieved target range.
CCPP (mg/L as CaCO ₃)	-	-	4.1	3.5	4.3	0.0	3.2	3.0	6.1	No City target but will be monitored during RO bypass evaluation.
Aggressive Index (AI)	-	11 to 13	12.2	12.2	12.3	11.8	12.2	12.2	12.5	Achieved target range specified by City email on 5/29/2024.

4.9.2 Documentation of System or Equipment Failures or Outages

Table 4-40 provides a summary of failures or outages related to the finished water.

Item	Duration	Description
Arcadia Wells	Days 1-7	Not online for the duration of the acceptance test.
Finished water chloramine and ammonia residual analyzer	Days 1-7	Not functional for the acceptance test, pending reagents to be purchased by the City.

4.10 Deviations from Acceptance Test Plan

The following deviations were noted during the 7-day acceptance test and were reported to and approved by the City upon initial findings:

1. Arcadia Wells were offline for the duration of the 7-day acceptance test due to insufficient time to bring the wells back online (requires chlorination, flushing, and bacteriological absent sample).
2. Olympic Well SM-9 was offline for the duration of the 7-day acceptance test due to VFD issues. Capacity from the Olympic AWTF was limited to 1,000 gpm from SM-8 only.
3. Due to miscommunication with the lab and system/equipment failures or outages documented above, several test conditions 1, 2, 3, 4, and 6 had to be recreated during the acceptance test period to collect missing samples. As such, continuous operation of testing was interrupted for 2/15 through 2/18 and restarted as soon as issues were resolved. See below for further discussion on plant outages.
4. Field water quality monitoring was not conducted during the weekends due to staffing availability from Brown and Caldwell. City is not responsible for the results of any monitoring during this period.
5. The following analyzers and meters were not functional or not available in Historian. Grab samples and/or manual field meter readings were used to determine performance and water quality.
 - a. Greensand effluent free chlorine (not in Historian, expected non-detect as chlorine added pre-greensand would be quenched by the H₂O₂ dosed in great excess).
 - b. Greensand effluent turbidity (not functional).
 - c. GAC pressure differential indicator transmitter not functional.
 - d. RO feed monochloramine and ammonia analyzer at RO feed tank (K) (not reading correctly due to missing reagents).
 - 1) Finished water monochloramine residual (not functional due to missing reagents).
 - 2) Finished water ammonia-to-chlorine ratio (not functional due to missing reagents).
6. A bump sequence on the GAC was not conducted and was deferred to after 7-day testing.
7. Antiscalant dose was increased to 4.5 parts per million (from the indicated 2.4 to 3.5 in the Test Plan) to help mitigate scaling at the brine system.

The total duration of outages during the 7-day acceptance test period was approximately 6.2 hours due to low UVT shutdowns (Section 4.5.3) and RO shutdowns (Section 4.7.3), with the longest single outage period lasting approximately 3.5 hours.

4.11 Operational and Treatment Performance Compliance

A summary of the 7-day acceptance test operational and treatment performance compliance is provided in Table 4-41. Treatment performance compliance criteria were achieved for the greensand, UV-AOP, GAC, FRRO, and decarbonator treatment systems. All Arcadia final effluent samples achieved primary MCLs, secondary MCLs, action levels, notification levels, and a COPC MCLeq of less than 1.

Arcadia specific finished water performance criteria were achieved for inorganic constituents (Exhibit 6, Table 4) and organic constituents (Exhibit 6, Table 3), except for a detection of TCE at 0.56 µg/L on Day 1. TCE concentrations observed in the RO feed water were contributed by Charnock WTP source water with all Olympic GAC effluent samples being non-detect. Arcadia specific finished water performance criteria were achieved for inorganic constituents (Exhibit 6, Table 4) and organic constituents (Exhibit 6, Table 3), except for a detection of TCE at 0.56 µg/L on Day 1. TCE concentrations observed in the RO feed water were contributed by Charnock WTP source water with all Olympic GAC effluent samples being non-detect. Some effluent water quality performance parameters (Exhibit 6, Table 5) were not achieved for all sample days. The bypass percentage used during the Acceptance Test was based on a conductivity limit of 300 µS/cm and the blend ratio was lower than may be used during long term operation—the TDS was below the target range all seven days and alkalinity was below the target range on two of the seven days at the bypass percentage used during the 7-Day test. The treated water pH was above the target range for three of the seven days. The Design-Builder will develop an additional, more detailed water quality profile of a range of bypass blend scenarios during the 30-day test following permit amendment approval by the DDW to demonstrate the system's ability to consistently meet the range of water quality goals described in Table 4-40 and Exhibit 6.

Table 4-41. 7-day Acceptance Test Performance Criteria

System	Parameter	Criteria	Compliance
Greensand	Iron ^a	≤ 0.3 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)	Achieved ^b
	Manganese ^a	≤ 0.05 mg/L in effluent (Target combined Fe, Mn ≤ 0.06 mg/L)	Achieved ^b
UV-AOP	1,4-Dioxane	≥ 2.4 log removal	Achieved
	TCE	≥ 2.2 log removal	Achieved
	PCE	≥ 2.3 log removal	Achieved
	Total flow	2,000 gpm	Achieved
	UVT	≥ 96%	Achieved
	UV System Power	329 kW	Final Trojan report pending ^c
GAC	H ₂ O ₂ Dose	Maximum H ₂ O ₂ dose of 40 mg/L	Achieved
	H ₂ O ₂	Quench residual H ₂ O ₂ to non-detect	Achieved
	COPCs	Document treatment performance	Achieved
	Loading Rate	≤ 5.9 gpm/ft ²	Achieved
	EBCT	≥ 5 minutes	Achieved
	Headloss	≤ 10-inch w.c./ft bed depth	Achieved

Table 4-41. 7-day Acceptance Test Performance Criteria

System	Parameter	Criteria	Compliance
FRRO	System Recovery	90%	Achieved
	Feed Flow Range, per Train	1,650 to 1,900 gpm	Achieved
	Feed Water pH	≥ 6.6	Achieved
	Antiscalant Dose	2.4 - 4.5 mg/L (Avista Vitec-4000) or 0.8 to 1.2 mg/L (AWC A-119)	Achieved
	COPCs	Document treatment performance	Achieved
Decarbonator	Carbon Dioxide	≤ 12 mg/L in effluent	Achieved
	Flow Rate	2,800 gpm (max)	Achieved
	Liquid Loading Rate	29.6 gpm/ft ² (max)	Achieved
Arcadia WTP Final Effluent (Arcadia Reservoir Effluent)	Organic Constituents	Exhibit 6, Table 3	Achieved ^d
	Inorganic Constituents	Exhibit 6, Table 4	Achieved
	DDW Water Quality Standards	MCL _{eq} < 1	Achieved
	pH	8.0 to 8.5	Achieved for 4 of the 7 days. Design-build team will refine pH control to demonstrate the system's ability to consistently operate within the target pH range
	Total Dissolved Solids	350 to 500 mg/L	TDS was below the target range at the bypass percentage used during the 7-Day test. Design-build team will develop a profile of a range of bypass blend scenarios. This information will be used to select a bypass target range for operations that meets the TDS goal.
	Turbidity	0.1 to 0.2 NTU	Achieved
	Alkalinity	75 - 150 mg/L as CaCO ₃	Day 5 and Day 6 were below target alkalinity at the bypass percentage used during the 7-Day test. Design-build team will develop a profile of a range of bypass blend scenarios. This information will be used to select a bypass target range for operations that meets the alkalinity goal.
	Fluoride	0.5 to 1.0 mg/L	Achieved
	LSI	-1.0 to 1.0 ^e	Achieved
	CCPP	N/A ^e	N/A. For informational purposes only
	Al	11 - 13 ^e	Achieved

- a. Iron and manganese criteria concentrations are based on feed water quality requirements specified in RO Specifications 46 63 23 Section 2.01. The greensand filter was operated to achieve the City target greensand effluent concentrations of iron + manganese ≤ 0.06 mg/L.
- b. Field sample results for day 2 did not achieve the target combined iron and manganese concentration but were identified as sample contamination or analytical error, due to subsequent sample results and Olympic source water concentrations being well below measured greensand concentrations.
- c. All organic treated water quality requirements were achieved during the 7-day acceptance test, except for TCE on Day 1. High TCE concentrations were contributed from Charnock WTP source water and not Olympic AWTF with all samples below MRL in the GAC effluent samples.
- d. Design log removal goals were achieved at design operating conditions. Final Trojan power measurements pending.
- e. LSI and CCPP revised, Al added as deviation from Exhibit 6 to match permit requirements per City directive received on 5/29/24. MCL_{eq} = maximum contaminant level equivalent calculated by the sum of each contaminant in the fully treated water divided by its respective maximum contaminant level (MCL) or notification level (where applicable), which must be less than 1.

Table 4-41. 7-day Acceptance Test Performance Criteria

System	Parameter	Criteria	Compliance
--------	-----------	----------	------------

AI = aggressive index

This page intentionally left blank.



Appendix A: Olympic AWTF Performance Testing Hardsheet



Test ID	PT-SWC1	PT-SWC2	PT-SW1	PT-SW2	PT-SW3	PT-SW4
Date	--	10/2/2023	--	--	--	10/3/2023
Start Time	--	13:00	--	--	--	9:53
End Time	--	13:24	--	--	--	10:13
Recorder	--	PW	--	--	--	PW

Target Conditions

SM-8 Flow	1,000	1,000	1,000	1,000	1,000	1,000
SM-9 Flow	1,000	1,000	1,000	1,000	1,000	1,000
Target Flow (gpm)	2,000	2,000	2,000	2,000	2,000	2,000

Operational Conditions: Well Blend

SM-8 Flow	1,000	1,001	999	999	1,000	991
SM-9 Flow	1,000	1,002	998	998	999	991
Target Flow (gpm)	2,000	2,003	1,997	1,997	1,999	1,982

Water Quality Monitoring (Grab): Sample Port (S4)

COPCs (Chlorinated)						
1,4-D (Weck)	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
PFAS (Weck)	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Background Water Quality						
Odor, Color	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Total Metals	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Dissolved Metals	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Chromium6	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCP	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Cl, F, SO4	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Ammonia, Phosphorus	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
Nitrate, Nitrite	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>
HPC, Total Coliform	--	<input checked="" type="checkbox"/>	--	--	--	<input checked="" type="checkbox"/>

Notes:

Odor, Color (140.1, SM2120B)	(1) 500 mL Glass
Total Metals (200.7, 200.8)	(1) 500 mL Poly with HNO3
Dissolved Metals (200.7, 200.8)	(1) 500 mL Poly
Chromium6 (218.6)	(1) 60 mL Poly
Alkalinity, TDS, Aggressive Index, CCP, Langelier (SM2320B, SM2540C)	(1) 2 L Poly
Cl, F, SO4 (300, 314)	(1) 60 mL Poly
Bromide, Bromate, Chlorate, Chlorite (300.1)	(1) 60 mL Poly
Ammonia, Phosphorus (350.1, 365.3)	(1) 500 mL Poly
Nitrate, Nitrite (353.2)	(1) 250 mL Poly
HPC, Total Coliform (SM9215, E9221 MTFT)	(1) 125 mL Poly sterile
1,4-Dioxane (522)	(2) 125 mL Amber Glass
VOCs (524.2)	(3) 40 mL VOA
1,2,3-TCP (524M)	(2) 40 mL VOA
PFAS (537.1)	(2) 250 mL Poly

Test ID	PT-SW5	PT-SW6	PT-SW7	PT-SW8	PT-SW9	PT-SW10
Date	--	--	--	10/4/2023	10/5/2023	10/5/2023
Start Time	--	--	--	9:17	8:48	13:10
End Time	--	--	--	9:37	9:07	13:30
Recorder	--	--	--	PW	PW	PW

Target Conditions

SM-8 Flow	1,000	1,000	1,000	1,000	750	0
SM-9 Flow	1,000	1,000	1,000	1,000	750	1,000
Target Flow (gpm)	2,000	2,000	2,000	2,000	1,500	1,000

Operational Conditions: Well Blend

SM-8 Flow	992	990	992	980	727	0
SM-9 Flow	989	998	980	990	722	988
Target Flow (gpm)	1,981	1,988	1,972	1,970	1,449	988

Water Quality Monitoring (Grab): Sample Port (S4)

COPCs (Chlorinated)						
1,4-D (Weck)	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (Weck)	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Background Water Quality (Weck)						
Odor, Color	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Metals	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dissolved Metals	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chromium6	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCP	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cl, F, SO4	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ammonia, Phosphorus	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nitrate, Nitrite	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HPC, Total Coliform	--	--	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

Odor, Color (140.1, SM2120B)	(1) 500 mL Glass
Total Metals (200.7, 200.8)	(1) 500 mL Poly with HNO3
Dissolved Metals (200.7, 200.8)	(1) 500 mL Poly
Chromium6 (218.6)	(1) 60 mL Poly
Alkalinity, TDS, Aggressive Index, CCP, Langelier (SM2320B, SM2540C)	(1) 2 L Poly
Cl, F, SO4 (300, 314)	(1) 60 mL Poly
Bromide, Bromate, Chlorate, Chlorite (300.1)	(1) 60 mL Poly
Ammonia, Phosphorus (350.1, 365.3)	(1) 500 mL Poly
Nitrate, Nitrite (353.2)	(1) 250 mL Poly
HPC, Total Coliform (SM9215, E9221 MTFT)	(1) 125 mL Poly sterile
1,4-Dioxane (522)	(2) 125 mL Amber Glass
VOCs (524.2)	(3) 40 mL VOA
1,2,3-TCP (524M)	(2) 40 mL VOA
PFAS (537.1)	(2) 250 mL Poly

Test ID	PT-SW11	PT-SW12	PT-SW13	PT-SW14	PT-SW15	PT-SW16
Date	--	9/22/2023	--	--	--	--
Start Time	--	12:35 PM	--	--	--	--
End Time	--	12:50 PM	--	--	--	--
Recorder	--	AW	--	--	--	--

Target Conditions

SM-8 Flow	0	1,000	1,000	1,000	1,000	1,000
SM-9 Flow	1,000	0	0	1,000	1,000	1,000
Target Flow (gpm)	1,000	1,000	1,000	2,000	2,000	2,000

Operational Conditions: Well Blend

SM-8 Flow (gpm)	--	1,000	1,000	990	989	999
SM-9 Flow (gpm)	989	0	--	983	982	986
Target Flow (gpm)	989	1,000	1,000	1,973	1,971	1,985

Water Quality Monitoring (Grab): Sample Port (S4)

COPCs (Chlorinated)						
1,4-D (Weck)	--	<input checked="" type="checkbox"/>	--	--	--	--
VOCs, Non-Cl2 (Weck)	--	<input checked="" type="checkbox"/>	--	--	--	--
1,2,3-TCP (Weck)	--	<input checked="" type="checkbox"/>	--	--	--	--
PFAS (Weck)	--	<input checked="" type="checkbox"/>	--	--	--	--
Background Water Quality						
Odor, Color	--	<input checked="" type="checkbox"/>	--	--	--	--
Total Metals	--	<input checked="" type="checkbox"/>	--	--	--	--
Dissolved Metals	--	<input checked="" type="checkbox"/>	--	--	--	--
Chromium6	--	<input checked="" type="checkbox"/>	--	--	--	--
Alkalinity, TDS, Aggressive Index, CCP	--	<input checked="" type="checkbox"/>	--	--	--	--
Cl, F, SO4	--	<input checked="" type="checkbox"/>	--	--	--	--
Bromide, Bromate, Chlorate, Chlorite	--	<input checked="" type="checkbox"/>	--	--	--	--
Ammonia, Phosphorus	--	<input checked="" type="checkbox"/>	--	--	--	--
Nitrate, Nitrite	--	<input checked="" type="checkbox"/>	--	--	--	--
HPC, Total Coliform	--	<input checked="" type="checkbox"/>	--	--	--	--

Notes:

Odor, Color (140.1, SM2120B)	(1) 500 mL Glass
Total Metals (200.7, 200.8)	(1) 500 mL Poly with HNO3
Dissolved Metals (200.7, 200.8)	(1) 500 mL Poly
Chromium6 (218.6)	(1) 60 mL Poly
Alkalinity, TDS, Aggressive Index, CCP, Langelier (SM2320B, SM2540C)	(1) 2 L Poly
Cl, F, SO4 (300, 314)	(1) 60 mL Poly
Bromide, Bromate, Chlorate, Chlorite (300.1)	(1) 60 mL Poly
Ammonia, Phosphorus (350.1, 365.3)	(1) 500 mL Poly
Nitrate, Nitrite (353.2)	(1) 250 mL Poly
HPC, Total Coliform (SM9215, E9221 MTFT)	(1) 125 mL Poly sterile
1,4-Dioxane (522)	(2) 125 mL Amber Glass
VOCs (524.2)	(3) 40 mL VOA
1,2,3-TCP (524M)	(2) 40 mL VOA
PFAS (537.1)	(2) 250 mL Poly

Test ID	PT-SW17	PT-SW18	PT-SW19	PT-SW20		
Date	--	--	--	--		
Start Time	--	--	--	--		
End Time	--	--	--	--		
Recorder	--	--	--	--		

Target Conditions

SM-8 Flow	1,000	1,000	1,000	1,000		
SM-9 Flow	1,000	1,000	1,000	1,000		
Target Flow (gpm)	2,000	2,000	2,000	2,000		

Operational Conditions: Well Blend

SM-8 Flow	994	993	992	992		
SM-9 Flow	996	980	980	980		
Target Flow (gpm)	1,990	1,973	1,972	1,972		

Water Quality Monitoring (Grab): Sample Port (S4)

COPCs (Chlorinated)						
1,4-D (Weck)	--	--	--	--		
VOCs, Non-Cl2 (Weck)	--	--	--	--		
1,2,3-TCP (Weck)	--	--	--	--		
PFAS (Weck)	--	--	--	--		
Background Water Quality						
Odor, Color	--	--	--	--		
Total Metals	--	--	--	--		
Dissolved Metals	--	--	--	--		
Chromium6	--	--	--	--		
Alkalinity, TDS, Aggressive Index, CCP	--	--	--	--		
Cl, F, SO4	--	--	--	--		
Bromide, Bromate, Chlorate, Chlorite	--	--	--	--		
Ammonia, Phosphorus	--	--	--	--		
Nitrate, Nitrite	--	--	--	--		
HPC, Total Coliform	--	--	--	--		

Notes:

Odor, Color (140.1, SM2120B)	(1) 500 mL Glass
Total Metals (200.7, 200.8)	(1) 500 mL Poly with HNO3
Dissolved Metals (200.7, 200.8)	(1) 500 mL Poly
Chromium6 (218.6)	(1) 60 mL Poly
Alkalinity, TDS, Aggressive Index, CCP, Langelier (SM2320B, SM2540C)	(1) 2 L Poly
Cl, F, SO4 (300, 314)	(1) 60 mL Poly
Bromide, Bromate, Chlorate, Chlorite (300.1)	(1) 60 mL Poly
Ammonia, Phosphorus (350.1, 365.3)	(1) 500 mL Poly
Nitrate, Nitrite (353.2)	(1) 250 mL Poly
HPC, Total Coliform (SM9215, E9221 MTFT)	(1) 125 mL Poly sterile
1,4-Dioxane (522)	(2) 125 mL Amber Glass
VOCs (524.2)	(3) 40 mL VOA
1,2,3-TCP (524M)	(2) 40 mL VOA
PFAS (537.1)	(2) 250 mL Poly

Test ID	PT-GSC1	PT-GSC2	PT-GS1	PT-GS2	PT-GS3	PT-GS4
Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/3/2023
Start Time	14:39	13:25	15:35	15:40	16:22	10:45
End Time	14:44	13:30	15:40	15:45	16:27	10:50
Recorder	PW	PW	PW	PW	PW	PW

Target Conditions

Sample ID	PT-GSC1	PT-GSC2	PT-GS1	PT-GS2	PT-GS3	PT-GS4
Units in Operation	5,6	5,6	5,6	5,6	5,6	5,6
Target Flow (gpm)	2,000	2,000	2,000	2,000	2,000	2,000

Operational Conditions: Greensand Filters

Units in Operation	5,6	5,6	5,6	5,6	5,6	5,6
Flow Rate, Effluent (gpm) ^a	2,000	2,003	1,997	1,997	1,999	1,982
Loading Rate (gpm/sf) ^a	Calc	Calc	Calc	Calc	Calc	Calc

Water Quality Monitoring (Grab): Greensand Filters

*Duplicate

Feed Sample Port (S4)						
Fe, Total (Field)	See GSC2	2.59	See GSC2	See GSC2	See GSC2	0.02
Mn, Total (Field)	See GSC2	0.348	See GSC2	See GSC2	See GSC2	0.053
Free Cl ₂ (Field)	See GSC2	0.86	See GSC2	See GSC2	See GSC2	0.2
Trubidity (Field)	See GSC2	148	See GSC2	See GSC2	See GSC2	0.56
Fe/Mn, Total (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Fe/Mn, Dissolved (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Effluent Sample Port (S8)						
Fe, Total (Field)	See GSC2	0.05	See GSC2	See GSC2	See GSC2	0.01
Mn, Total (Field)	See GSC2	0.035	See GSC2	See GSC2	See GSC2	0.035
Free Cl ₂ (Field)	0.02	0.05	See GSC2	See GSC2	See GSC2	0.02
Trubidity (Field)	0.31	1.56	See GSC2	See GSC2	See GSC2	0.2
SDI (Field)	--	--	--	--	--	See GS16
Fe/Mn, Total (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Fe/Mn, Dissolved (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Water Quality Monitoring (Online): Greensand Filters

Feed Sample Location (C)						
Free Chlorine (Avg) ^a	Not Operation	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Turbidity (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Effluent Sample Location (F)						
Free Chlorine (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Turbidity (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating

Notes:

Fe/Mn, **Total** Sample (Weck) - (1) 500 mL Poly with **HNO₃**

Fe/Mn, **Dissolved** Sample (Weck) - (1) 500 mL Poly **unpreserved**

*Field measurements for PT-GSC2 are suspected to be outliers.

Sample ID: PT-GS#-S4

a. Record value displayed on field monitor

PT-GS#-S8

Test ID	PT-GS5	PT-GS6	PT-GS7	PT-GS8	PT-GS9	PT-GS10
Date	10/3/2023	10/3/2023	10/4/2023	10/4/2023	10/5/2023	10/5/2023
Start Time	11:30	14:04	8:50	9:10	8:50	13:10
End Time	11:35	14:09	8:55	9:15	8:55	13:15
Recorder	PW	PW	PW	PW	PW	PW

Target Conditions

Sample ID	PT-GS5	PT-GS6	PT-GS7	PT-GS8	PT-GS9	PT-GS10
Units in Operation	5,6	5,6	5,6	5,6	5,6	5,6
Target Flow (gpm)	2,000	2,000	2,000	2,000	1,500	1,000

Operational Conditions: Greensand Filters

Units in Operation	5,6	5,6	5,6	5,6	5,6	5,6
Flow Rate, Effluent (gpm) ^a	1,981	1,988	1,972	1,970	1,449	988
Loading Rate (gpm/sf) ^a	Calc	Calc	Calc	Calc	Calc	Calc

Water Quality Monitoring (Grab): Greensand Filters

*Duplicate

Feed Sample Port (S4)						
Fe, Total (Field)	See GS4	See GS4	See GS8	0.03	0	See GS11
Mn, Total (Field)	See GS4	See GS4	See GS8	0.038	0.035	See GS11
Free Cl ₂ (Field)	See GS4	See GS4	See GS8	0.13	0.01	See GS11
Trubidity (Field)	See GS4	See GS4	See GS8	1.76	0.31	See GS11
Fe/Mn, Total (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fe/Mn, Dissolved (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Effluent Sample Port (S8)						
Fe, Total (Field)	See GS4	See GS4	See GS8	0.02	0	See GS11
Mn, Total (Field)	See GS4	See GS4	See GS8	0.035	0.03	See GS11
Free Cl ₂ (Field)	See GS4	See GS4	See GS8	0.02	0	See GS11
Trubidity (Field)	See GS4	See GS4	See GS8	0.08	0.21	See GS11
SDI (Field)	See GS16	See GS16	See GS19	See GS19	1.07	See GS11
Fe/Mn, Total (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fe/Mn, Dissolved (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Online): Greensand Filters

Feed Sample Location (C)						
Free Chlorine (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Turbidity (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Effluent Sample Location (F)						
Free Chlorine (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Turbidity (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating

Notes:

Fe/Mn, **Total** Sample (Weck) - (1) 500 mL Poly with **HNO₃**

Fe/Mn, **Dissolved** Sample (Weck) - (1) 500 mL Poly **unpreserved**

PT-GS9: T₀ = 1.03, T₁₅ = 1.15

Sample ID: PT-GS#-S4

a. Record value displayed on field monitor

PT-GS#-S8

Test ID	PT-GS11	PT-GS12	PT-GS13	PT-GS14	PT-GS15	PT-GS16
Date	10/5/2023	9/22/2023	9/22/2023	10/4/2023	10/4/2023	10/3/2023
Start Time	15:15	15:00	16:00	15:25	16:00	14:30
End Time	15:20	15:05	16:03	15:30	16:05	14:35
Recorder	PW	AW	AW	PW	PW	PW

Target Conditions

Sample ID	PT-GS11	PT-GS12	PT-GS13	PT-GS14	PT-GS15	PT-GS16
Units in Operation	5,6	5,6	5,6	5,6	5,6	5,6
Target Flow (gpm)	1,000	1,000	1,000	2,000	2,000	2,000

Operational Conditions: Greensand Filters

Units in Operation	5,6	5,6	5,6	5,6	5,6	5,6
Flow Rate, Effluent (gpm) ^a	989	869	870	1,973	1,971	1,988
Loading Rate (gpm/sf) ^a	Calc	Calc	Calc	Calc	Calc	Calc

Water Quality Monitoring (Grab): Greensand Filters

Feed Sample Port (S4)						
Fe, Total (Field)	0.02	0.02	0	See GS8	See GS8	See GS4
Mn, Total (Field)	0.04	0	0	See GS8	See GS8	See GS4
Free Cl ₂ (Field)	0.01	0	0	See GS8	See GS8	See GS4
Turbidity (Field)	0.32	0.45	0.39	See GS8	See GS8	See GS4
Fe/Mn, Total (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fe/Mn, Dissolved (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Effluent Sample Port (S8)						
Fe, Total (Field)	0.01	0	0	See GS8	See GS8	See GS4
Mn, Total (Field)	0.024	0	0	See GS8	See GS8	See GS4
Free Cl ₂ (Field)	0.01	0	0	See GS8	See GS8	See GS4
Turbidity (Field)	0.35	0.05	0.08	See GS8	See GS8	See GS4
SDI (Field)	1.42	--	--	See GS19	See GS19	1.75
Fe/Mn, Total (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fe/Mn, Dissolved (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Online): Greensand Filters

Feed Sample Location (C)						
Free Chlorine (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Turbidity (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Effluent Sample Location (F)						
Free Chlorine (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating
Turbidity (Avg) ^a	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating	Not Operating

Notes:

Fe/Mn, **Total** Sample (Weck) - (1) 500 mL Poly with **HNO₃**

Fe/Mn, **Dissolved** Sample (Weck) - (1) 500 mL Poly **unpreserved**

PT-GS16: T₀ = 1.03, T₁₅ = 1.25

Sample ID: PT-GS#-S4

a. Record value displayed on field monitor

PT-GS#-S8

Test ID	PT-GS17	PT-GS18	PT-GS19	PT-GS20		
Date	10/3/2023	10/4/2023	10/4/2023	10/4/2023		
Start Time	14:53	14:30	13:43	14:50		
End Time	14:58	14:35	13:48	14:55		
Recorder	PW	PW	PW	PW		

Target Conditions

Sample ID	PT-GS17	PT-GS18	PT-GS19	PT-GS20		
Units in Operation	5,6	5,6	5,6	5,6		
Target Flow (gpm)	2,000	2,000	2,000	2,000		

Operational Conditions: Greensand Filters

Units in Operation	5,6	5,6	5,6	5,6		
Flow Rate, Effluent (gpm) ^a	1,990	1,973	1,972	1,972		
Loading Rate (gpm/sf) ^a	Calc	Calc	Calc	Calc		

Water Quality Monitoring (Grab): Greensand Filters

Feed Sample Port (S4)						
Fe, Total (Field)	See GS4	See GS8	See GS8	See GS8		
Mn, Total (Field)	See GS4	See GS8	See GS8	See GS8		
Free Cl ₂ (Field)	See GS4	See GS8	See GS8	See GS8		
Turbidity (Field)	See GS4	See GS8	See GS8	See GS8		
Fe/Mn, Total (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fe/Mn, Dissolved (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Effluent Sample Port (S8)						
Fe, Total (Field)	See GS4	See GS8	See GS8	See GS8		
Mn, Total (Field)	See GS4	See GS8	See GS8	See GS8		
Free Cl ₂ (Field)	See GS4	See GS8	See GS8	See GS8		
Turbidity (Field)	See GS4	See GS8	See GS8	See GS8		
SDI (Field)	See GS16	See GS19	1.38	See GS19		
Fe/Mn, Total (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fe/Mn, Dissolved (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Water Quality Monitoring (Online): Greensand Filters

Feed Sample Location (C)						
Free Chlorine (Avg) ^a	--	--	--	--	--	--
Turbidity (Avg) ^a	--	--	--	--	--	--
Effluent Sample Location (F)						
Free Chlorine (Avg) ^a	--	--	--	--	--	--
Turbidity (Avg) ^a	--	--	--	--	--	--

Notes:

Fe/Mn, **Total** Sample (Weck) - (1) 500 mL Poly with **HNO₃**

Fe/Mn, **Dissolved** Sample (Weck) - (1) 500 mL Poly **unpreserved**

PT-GS19: T₀ = 1.13, T₁₅ = 1.32

Test ID	PT-UV <u>C1</u>	PT-UV <u>C2</u>	PT-UV1	PT-UV2	PT-UV3	PT-UV4
Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/3/2023
Start Time	13:10	14:37	15:35	15:40	16:22	10:45
End Time	13:15	14:52	15:40	15:45	16:27	10:50
Recorder	SS	SS	EM	EM	EM	SS

Target Conditions

*Duplicate

Sample ID	PT-UV <u>C1</u>	PT-UV <u>C2</u>	PT-UV1	PT-UV2	PT-UV3	PT-UV4
Units in Operation	2	2	2	2	2	2
Mode	Manual	Manual	Manual	Manual	Manual	Auto
SM-8 Flow (gpm)	1,000	1,000	1,000	1,000	1,000	1,000
SM-9 Flow (gpm)	1,000	1,000	1,000	1,000	1,000	1,000
Target Flow (gpm)	2,000	2,000	2,000	2,000	2,000	2,000
Scavenging Term (s ⁻¹)	130,000	130,000	130,000	130,000	124,000	130,000
UVT (%)	amb.	amb.	96	96	96	96
pH	amb.	amb.	amb.	amb.	amb.	amb.
Lamp power (%)	0	100	84	84	84	Auto
H ₂ O ₂ Setpoint (mg/L)	40	0	40	40	37	Auto
1,4-D Log Setpoint	-	-	-	-	-	2.4
PCE Log Setpoint	-	-	-	-	-	2.3
TCE Log Setpoint	-	-	-	-	-	2.2

Operational Conditions: UV-AOP

Units in Operation	2	2	2	2	2	2
Mode	Manual	Manual	Manual	Manual	Manual	Auto
SM-8 Flow (gpm) ^a	50%	50%	50%	50%	50%	50%
SM-9 Flow (gpm) ^a	50%	50%	50%	50%	50%	50%
Target Flow (gpm) ^a	2,000	2,003	1,997	1,997	1,999	1,982
1,4-D Log Setpoint/Operational	--	--	--	--	--	2.4/2.64
PCE Log Setpoint/Operational	--	--	--	--	--	2.3/2.53
TCE Log Setpoint/Operational	--	--	--	--	--	2.2/2.42
Scavenging Term (s ⁻¹)	--	--	--	--	--	130,000
Fouling Factor	--	--	--	--	--	--
UV Filter Factor	0.3	0.3	0.3	0.3	0.3	0.3
Lamp Sections	0	11	11	11	11	10
Lamp Power	0	100%	84.00%	84	83	77.5
Lamp age (hr)	13	13	14	14	15	18
Sensor Intensity		Not Recorded	Not Recorded	Not Recorded	Not Recorded	
Section 1	0					4.64
Section 2	0					4.93
Section 3	0					4.92
Section 4	0					5.26
Section 5	0					4.8
Section 6	0					5.42
Section 7	0					5.68
Section 8	0					5.33
Section 9	0					5.69
Section 10	0					5.89
Section 11	0					0.19
Peroxide Cost (\$/L)	\$1.11	\$1.11	\$1.11	\$1.11	\$1.11	\$1.11
Energy Cost (\$/kwh)	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60
Predicted 1,4-D Removal	--	--	--	--	--	2.66
Predicted PCE Removal	--	--	--	--	--	2.55
Predicted TCE Removal	--	--	--	--	--	2.78
Influent Pressure (psi)	26	26	26	26	26	26
Effluent Pressure (psi)	26	26	26	26	25	26
H ₂ O ₂ Setpoint (mg/L)	39.6	0	39.73	39.7	36.98	30.71
H ₂ O ₂ Injection Rate (gph)	8.27	0	Not Recorded	Not Recorded	Not Recorded	Not Recorded
H ₂ O ₂ est. Concentration (mg/L)	39.6	0	Not Recorded	Not Recorded	Not Recorded	30.71

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Sample ID: PT-UV#-S9

PT-UV#-S10

Notes:

*PT-UV3 H2O2 setpoint adjusted based on Trojan model

Water Quality Monitoring (Grab): UV-AOP

*Duplicate

UV-AOP Pre H2O2	PT-UVC1	PT-UVC2	PT-UV1	PT-UV2	PT-UV3	PT-UV4
UVT (Field)	98.1	98.0	95.8	95.7	95.8	95.8
UV-AOP Feed (S9)						
H ₂ O ₂ (Field)	39.56	0	40.76	41.24	37.88	30.69
UVT (Field)	93.22	98	90.59	90.42	90.98	91.84
pH (Field)	7.06	7.02	7.03	7.02	7.02	6.95
1,4-dioxane (Weck) ^b	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒
TCE/PCE (Weck)	☒	☒	☒	☒	☒	☒ ☒
UV-AOP Effluent (S10)						
H ₂ O ₂ (Field)	40.51	0	23.26	23	21.34	18.22
UVT (Field)	93.2	98.23	94.55	94.56	94.92	95.22
pH (Field)	7.06	7.02	7.03	7.03	7.04	6.95
1,4-dioxane (Weck) ^b	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒
TCE/PCE (Weck)	☒	☒	☒	☒	☒	☒ ☒
1,2,3-TCP (Weck)	☒	☒	☒	☒	☒	☒ ☒
PFAS (Weck)	☒	☒	☒	☒	☒	☒ ☒

Water Quality Monitoring (Online): UV-AOP

UV-AOP Feed (G)						
UVT (online)	98.5	98.5	95.7	95.7	95.7	95.9
pH (online)	Not Recorded	Not Recorded	Not Recorded	Not Recorded	Not Recorded	6.92

Notes:

1,4-dioxane Sample (EPA 522) - (2) 125 mL Amber Glass

TCE/PCE Sample (524.2) - (3) 40 mL VOA **no ascorbic** (non-chlorinated)

PT-UVC1 to PT-UV3: pH probe required recalibration/removal of bubbles.

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Test ID	PT-UV5	PT-UV6	PT-UV7	PT-UV8	PT-UV9	PT-UV10
Date	10/3/2023	10/3/2023	10/4/2023	10/4/2023	10/5/2023	10/5/2023
Start Time	11:30	14:04	8:50	9:10	8:48	14:35
End Time	11:35	14:09	8:55	9:15	8:53	14:40
Recorder	SS	SS	SS	SS	SS	SS

Target Conditions

*Duplicate

Sample ID	PT-UV5	PT-UV6	PT-UV7	PT-UV8	PT-UV9	PT-UV10
Units in Operation	2	2	2	2	2	2
Mode	Auto	Auto	Auto	Auto	Auto	Auto
SM-8 Flow (gpm)	1,000	1,000	1,000	1,000	750	0
SM-9 Flow (gpm)	1,000	1,000	1,000	1,000	750	1,000
Target Flow (gpm)	2,000	2,000	2,000	2,000	1,500	1,000
Scavenging Term (s ⁻¹)	130,000	130,000	130,000	124,000	130,000	130,000
UVT (%)	93	amb.	amb.	amb.	amb.	amb.
pH	amb.	amb.	amb.	amb.	amb.	amb.
Lamp power (%)	Auto	Auto	Auto	Auto	Auto	Auto
H ₂ O ₂ Setpoint (mg/L)	Auto	Auto	Auto	Auto	Auto	Auto
1,4-D Log Setpoint	2.4	2.4	1.2	1.2	2.4	2.4
PCE Log Setpoint	2.3	2.3	1.15	1.15	2.3	2.3
TCE Log Setpoint	2.2	2.2	1.1	1.1	2.2	2.2

Operational Conditions: UV-AOP

Units in Operation	2	2	2	2	2	2
Mode	Auto	Auto	Auto	Auto	Auto	Manual
SM-8 Flow (gpm) ^a	990.5	994	986	985	724.5	0
SM-9 Flow (gpm) ^a	990.5	994	986	985	724.5	988
Target Flow (gpm) ^a	1981	1988	1972	1970	1449	988
1,4-D Log Setpoint/Operational	2.4/2.64	2.4/2.64	1.2/1.32	1.2/1.32	2.4/2.64	--
PCE Log Setpoint/Operational	2.3/2.53	2.3/2.53	1.15/1.26	1.15/1.26	2.3/2.53	--
TCE Log Setpoint/Operational	2.2/2.42	2.2/2.42	1.1/1.21	1.1/1.21	2.2/2.42	--
Scavenging Term (s ⁻¹)	130,000	130,000	130,000	124,000	130,000	--
Fouling Factor	--	--	--	--	--	--
UV Filter Factor	0.3	0.3	0.3	0.3	0.3	0.3
Lamp Sections	11	7	4	4	6	5
Lamp Power	95	82.00%	64.50%	61.5	70.5	58.5
Lamp age	19 hr	22 hr	23 hr	23 hr	23 hr	29 hr
Sensor Intensity						
Section 1	4.7	5.74	4.86	4.77	5.22	4.6
Section 2	4.98	6.18	5.3	5.15	5.68	5.0
Section 3	4.99	6.14	5.17	5.05	5.62	4.99
Section 4	5.24	6.63	5.36	5.21	6.08	5.37
Section 5	4.91	6.08			5.7	4.89
Section 6	5.58	6.81			6.0	
Section 7	5.94	6.92				
Section 8	5.76					
Section 9	5.84					
Section 10	6.09					
Section 11	5.78					
Peroxide Cost (\$/L)	\$1.11	\$1.11	\$1.11	\$1.11	\$1.11	\$1.11
Energy Cost (\$/kwh)	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60
Predicted 1,4-D Removal	2.76	2.65	1.33	1.33	2.67	--
Predicted PCE Removal	2.54	2.59	1.3	1.31	2.65	--
Predicted TCE Removal	2.87	2.77	1.39	1.39	2.79	--
Influent Pressure (psi)	26	26	28	28	18	24
Effluent Pressure (psi)	25	26	28	28	18	24
H ₂ O ₂ Setpoint (mg/L)	38.3	28.59	23.44	22.19	27.32	--
H ₂ O ₂ Injection Rate (gph)	8.02	5.77	4.51	4.51	4	2.9
H ₂ O ₂ est. Concentration (mg/L)	38.3	28.59	23.44	22.19	27.32	--

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Sample ID: PT-UV#-S9

PT-UV#-S10

Water Quality Monitoring (Grab): UV-AOP

*Duplicate

UV-AOP Pre H2O2	PT-UV5	PT-UV6	PT-UV7	PT-UV8	PT-UV9	PT-UV10
UVT (Field)	92.97	98.59	98.48	98.58	98.35	98.85
UV-AOP Feed (S9)						
H ₂ O ₂ (Field)	37.4	29.25	23.5	21.58	28.29	27.67
UVT (Field)	88.64	94.88	95.47	95.83	94.83	95.42
pH (Field)	7.11	7.1	6.9	6.91	6.83	6.87
1,4-dioxane (Weck) ^b	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒
TCE/PCE (Weck)	☒	☒	☒	☒ ☒	☒	☒
UV-AOP Effluent (S10)						
H ₂ O ₂ (Field)	23.02	17.02	18.7	16.78	14.87	15.67
UVT (Field)	92.8	97.04	96.63	96.87	97.29	97.61
pH (Field)	7.09	7.02	6.96	6.94	6.84	6.87
1,4-dioxane (Weck) ^b	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒
TCE/PCE (Weck)	☒	☒	☒	☒	☒	☒
1,2,3-TCP (Weck)	☒	☒	☒	☒	☒	☒
PFAS (Weck)	☒	☒	☒	☒	☒	☒

Water Quality Monitoring (Online): UV-AOP

UV-AOP Feed (G)						
UVT (online)	93.45	98.6	98.5	98.6	98.55	98.82
pH (online)	6.9	7.02	6.84	6.85	6.81	6.86

Notes:

1,4-dioxane Sample (EPA 522) - (2) 125 mL Amber Glass

TCE/PCE Sample (524.2) - (3) 40 mL VOA **no ascorbic** (non-chlorinated)

*PLC fan was not on during PT-UV9 at UV feed sample location.

*Prior to PT-UV10, the H2O2 injection line broke forcing immediate shutdown of the UV system. After replacing the H2O2 line, the UV system would not communicate with the feed flow meter (i.e., read zero flow), which would not allow the UV system to operate in Auto mode (lamps would not turn on, because it was reading zero flow). Due to limited well operation time (well shutdown at 2:30 pm), we conducted condition 10 in manual mode following the UV lamp and H2O2 setpoints conducted for condition 12.

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Test ID	PT-UV11	PT-UV12	PT-UV13	PT-UV14	PT-UV15	PT-UV16
Date	10/5/2023	9:22/2023	9:22/2023	10/4/2023	10/4/2023	10/3/2023
Start Time	15:20	15:00	16:00	15:25	16:00	14:30
End Time	15:25	15:10	16:10	15:30	16:05	14:35
Recorder	SS	SS	EM	SS	SS	SS

Target Conditions

Sample ID	PT-UV11	PT-UV12	PT-UV13	PT-UV14	PT-UV15	PT-UV16
Units in Operation	2	2	2	2	2	2
Mode	Auto	Auto	Auto	Auto	Auto	Auto
SM-8 Flow (gpm)	0	1,000	1,000	1,000	1,000	1,000
SM-9 Flow (gpm)	1,000	0	0	1,000	1,000	1,000
Target Flow (gpm)	1,000	1,000	1,000	2,000	2,000	2,000
Scavenging Term (s ⁻¹)	124,000	130,000	124,000	90,000	90,000	130,000
UVT (%)	amb.	amb.	amb.	amb.	amb.	amb.
pH	amb.	amb.	amb.	6.5	6.6	amb.
Lamp power (%)	Auto	Auto	Auto	Auto	Auto	Auto
H ₂ O ₂ Setpoint (mg/L)	Auto	Auto	Auto	Auto	Auto	Auto
1,4-D Log Setpoint	2.4	2.4	2.4	1.2	1.2	1.8
PCE Log Setpoint	2.3	2.3	2.3	1.15	1.15	1.73
TCE Log Setpoint	2.2	2.2	2.2	1.1	1.1	1.65

Operational Conditions: UV-AOP

Units in Operation	2	2	2	2	2	2
Mode	Auto	Auto	Auto	Auto	Auto	Auto
SM-8 Flow (gpm) ^a	0	869	870	986.5	985.5	992.5
SM-9 Flow (gpm) ^a	989	0	0	986.5	985.5	992.5
Target Flow (gpm) ^a	989	1000	1000	1973	1971	1985
1,4-D Log Setpoint	2.4/2.64	2.4/2.64	2.4/2.64	1.2/1.32	1.2/1.32	1.8/1.98
PCE Log Setpoint	2.3/2.53	2.3/2.53	2.3/2.53	1.15/1.26	1.15/1.26	1.73/1.9
TCE Log Setpoint	2.2/2.42	2.2/2.42	2.2/2.42	1.1/1.21	1.1/1.21	1.65/1.81
Scavenging Term (s ⁻¹)	124,000	130,000	124,000	90,000	90,000	130,000
Fouling Factor	--	--	--	--	--	--
UV Filter Factor	0.3	0.3	0.3	0.3	0.3	0.3
Lamp Sections	5	5	5	3	3	Not Recorded
Lamp Power	57%	58.50%	57.50%	67.50%	66.50%	Not Recorded
Lamp age	38 hr	5 hr	5 hr	29 hr	30 hr	22 hr
Sensor Intensity			Not Recorded			Not Recorded
Section 1	4.62	4.35		5.18	5.13	
Section 2	5.06	4.83		5.61	5.53	
Section 3	5.06	4.9		5.32	5.23	
Section 4	5.48	5.43				
Section 5	4.95	4.87				
Section 6						
Section 7						
Section 8						
Section 9						
Section 10						
Section 11						
Peroxide Cost (\$/L)	\$1.11	\$1.11	\$1.11	\$1.11	\$1.11	\$1.11
Energy Cost (\$/kwh)	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60
Predicted 1,4-D Removal	2.66	2.67	2.67	1.38	1.38	1.99
Predicted PCE Removal	2.75	2.67	2.69	1.27	1.27	1.99
Predicted TCE Removal	2.79	2.79	2.80	1.43	1.43	2.08
Influent Pressure (psi)	24	31	31	28	28	26
Effluent Pressure (psi)	24	31	31	28	28	26
H ₂ O ₂ Setpoint (mg/L)	23.21	26.67	25.37	22.11	22.16	Not Recorded
H ₂ O ₂ Injection Rate (gph)	2.53	2.84	2.67	4.75	4.78	Not Recorded
H ₂ O ₂ est. Concentration (mg/L)	23.21	26.67	26.67	22.11	22.16	Not Recorded

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Sample ID: PT-UV#-S9

PT-UV#-S10

Water Quality Monitoring (Grab): UV-AOP

UV-AOP Pre H2O2	PT-UV11	PT-UV12	PT-UV13	PT-UV14	PT-UV15	PT-UV16
UVT (Field)	98.86	97.6	97.6	98.69	98.62	98.61
UV-AOP Feed (S9)						
H ₂ O ₂ (Field)	24.7	28.05	25.42	23.98	23.98	24.22
UVT (Field)	95.77	94.73	94.85	95.72	95.67	95.49
pH (Field)	6.85	6.83	6.97	6.5	6.6	7.04
1,4-dioxane (Weck) ^b	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒
TCE/PCE (Weck)	☒	☒	☒	☒	☒	☒
UV-AOP Effluent (S10)						
H ₂ O ₂ (Field)	11.99	13.19	11.99	19.66	19.18	15.83
UVT (Field)	97.89	97.61	97.54	96.7	96.67	97.23
pH (Field)	6.84	6.9	6.94	6.51	6.6	7.08
1,4-dioxane (Weck) ^b	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒	☒ ☒
TCE/PCE (Weck)	☒	☒	☒	☒	☒	☒
1,2,3-TCP (Weck)	☒	☒	☒	☒	☒	☒
PFAS (Weck)	☒	☒	☒	☒	☒	☒

Water Quality Monitoring (Online): UV-AOP

UV-AOP Feed (G)						
UVT (online)	98.82	98.0	97.6	98.57	98.64	98.63
pH (online)	6.88	6.91	6.91	6.49	6.59	7.06

Notes:

1,4-dioxane Sample (EPA 522) - (2) 125 mL Amber Glass

TCE/PCE Sample (524.2) - (3) 40 mL VOA **no ascorbic** (non-chlorinated)

*PT-UV16: Trojan did not take photos of system settings. Pulled available recorded data off historian

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Test ID	PT-UV17	PT-UV18	PT-UV19	PT-UV20		
Date	10/3/2023	10/4/2023	10/4/2023	10/4/2023		
Start Time	14:53	14:20	13:53	14:50		
End Time	14:58	14:25	13:58	14:55		
Recorder	SS	SS	SS	SS		

Target Conditions

Sample ID	PT-UV17	PT-UV18	PT-UV19	PT-UV20		
Units in Operation	2	2	2	2		
Mode	Auto	Auto	Auto	Auto		
SM-8 Flow (gpm)	1,000	1,000	1,000	1,000		
SM-9 Flow (gpm)	1,000	1,000	1,000	1,000		
Target Flow (gpm)	2,000	2,000	2,000	2,000		
Scavenging Term (s ⁻¹)	124,000	130,000	130,000	90,000		
UVT (%)	amb.	amb.	96	amb.		
pH	amb.	6.5	6.5	6.5		
Lamp power (%)	Auto	Auto	Auto	Auto		
H ₂ O ₂ Setpoint (mg/L)	Auto	Auto	Auto	Auto		
1,4-D Log Setpoint	1.8	2.4	2.4	2.4		
PCE Log Setpoint	1.73	2.3	2.3	2.3		
TCE Log Setpoint	1.65	2.2	2.2	2.2		

Operational Conditions: UV-AOP

Units in Operation	2	2	2	2		
Mode	Auto	Auto	Auto	Auto		
SM-8 Flow (gpm) ^a	995	986.5	986	986		
SM-9 Flow (gpm) ^a	995	986.5	986	986		
Target Flow (gpm) ^a	1990	1973	1972	1972		
1,4-D Log Setpoint	1.8/1.98	2.4/2.64	2.4/2.64	2.4/2.64		
PCE Log Setpoint	1.73/1.9	2.3/2.53	2.3/2.53	2.3/2.53		
TCE Log Setpoint	1.65/1.81	2.2/2.42	2.2/2.42	2.2/2.42		
Scavenging Term (s ⁻¹)	124,000	130,000	130,000	90,000		
Fouling Factor	--	--	--	--		
UV Filter Factor	0.3	0.3	0.3	0.3		
Lamp Sections	6	8	10	7		
Lamp Power	77.0%	70.0%	74.5%	62.5%		
Lamp age	22 hr	28 hr	27 hr	28 hr		
Sensor Intensity						
Section 1	6.08	5.19	4.52	4.87		
Section 2	6.24	5.63	4.82	5.26		
Section 3	6.16	5.53	4.8	5.21		
Section 4	6.66	5.93	5.1	5.56		
Section 5	6.08	5.55	4.74	5.16		
Section 6	6.54	6.14	5.25	5.69		
Section 7		6.46	5.59	5.74		
Section 8		5.97	5.43			
Section 9			5.59			
Section 10			5.76			
Section 11						
Peroxide Cost (\$/L)	\$1.11	\$1.11	\$1.11	\$1.11		
Energy Cost (\$/kwh)	\$0.60	\$0.60	\$0.60	\$0.60		
Predicted 1,4-D Removal	Not Recorded	2.65	2.68	2.67		
Predicted PCE Removal	Not Recorded	2.66	2.55	2.55		
Predicted TCE Removal	Not Recorded	2.78	2.80	2.79		
Influent Pressure (psi)	26	28	28	28		
Effluent Pressure (psi)	26	28	28	28		
H ₂ O ₂ Setpoint (mg/L)	23.07	26.02	31.24	22.33		
H ₂ O ₂ Injection Rate (gph)	4.69	5.37	6.36	4.81		
H ₂ O ₂ est. Concentration (mg/L)	23.07	26.02	31.24	22.33		

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Sample ID: PT-UV#-S9

PT-UV#-S10

Water Quality Monitoring (Grab): UV-AOP

UV-AOP Pre H2O2	PT-UV17	PT-UV18	PT-UV19	PT-UV20		
UVT (Field)	98.63	98.64	96.03	98.66		
UV-AOP Feed (S9)						
H ₂ O ₂ (Field)	23.98	26.85	31.65	23.74		
UVT (Field)	95.54	95.16	91.92	95.67		
pH (Field)	6.94	6.51	6.51	6.5		
1,4-dioxane (Weck) ^b	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
TCE/PCE (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UV-AOP Effluent (S10)						
H ₂ O ₂ (Field)	14.15	14.87	18.7	14.39		
UVT (Field)	97.45	97.29	95.42	97.44		
pH (Field)	6.92	6.52	6.52	6.5		
1,4-dioxane (Weck) ^b	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
TCE/PCE (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Water Quality Monitoring (Online): UV-AOP

UV-AOP Feed (G)						
UVT (online)	98.7	98.7	95.9	98.49		
pH (online)	7.09	6.48	6.49	6.49		

Notes:

1,4-dioxane Sample (EPA 522) - (2) 125 mL Amber Glass

TCE/PCE Sample (524.2) - (3) 40 mL VOA **no ascorbic** (non-chlorinated)

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Test ID	PT-GACC1	PT-GACC2	PT-GAC1	PT-GAC2	PT-GAC3	PT-GAC4
Date	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/2/2023	10/3/2023
Start Time	13:45	15:12	16:10	16:40	16:57	11:20
End Time	14:20	15:37	16:35	16:55	17:15	11:45
Recorder	AW	AW	AW	AW	AW	AW

Target Conditions

Sample ID	PT-GACC1	PT-GACC2	PT-GAC1	PT-GAC2	PT-GAC3	PT-GAC4
Trains in Operation	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2
Train Sampled for COPCs	1	1	1	1	1	1
Target Total Flow (gpm)	2,000	2,000	2,000	2,000	2,000	2,000

Operational Conditions: GAC

Units in Operation	1,2	1,2	1,2	1,2	1,2	1,2
Unit Sampled for COPCs	1	1	1	1	1	1
Flow Rate, Feed (gpm) ^a	1990	1985	1985	1985	1982	1967
Lead Vessel Differential Pressure (psi) ^a	2	2	2	2	2	2
Lag Vessel Differential Pressure (psi) ^a	0	0	0	0	0	0
Bump Flow Rate	--	--	--	--	--	--
Bump Duration ^a	--	--	--	--	--	--
Influent Pressure pre-Bump ^a	--	--	--	--	--	--
Influent Pressure post-Bump ^a	--	--	--	--	--	--

Water Quality Monitoring (Grab): GAC

*Duplicate

Hydrogen Peroxide, Lead Vessel (Train 1/Train 2/Train 3)						
Port 1	3/3	0/0	3/3	3/3	3/3	2/3
Port 2	0/0	0/0	0/0	0/0	0/0	1/1
Port 3	0/0	0/0	0/0	0/0	0/0	0/0
Port 4	0/0	0/0	0/0	0/0	0/0	0/0
Hydrogen Peroxide, Lag Vessel (Train 1/Train 2/Train 3)						
Port 1	0/0	0/0	0/0	0/0	0/0	0/0
Port 2	0/0	0/0	0/0	0/0	0/0	0/0
Port 3	0/0	0/0	0/0	0/0	0/0	0/0
Port 4	0/0	0/0	0/0	0/0	0/0	0/0
COPCs, GAC Influent (S10)						
1,4-D (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV
VOCs, Non-Cl2 (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV
1,2,3-TCP (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV
PFAS (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV
COPCs, Lead Vessel (S23)						
1,4-D (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
COPCs, Lag Vessel (S11)						
H2O2 (Field)	0	0	0	0	0	0
1,4-D (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

a. Average of online exported data over time range of sample event.

b. H2O2 measured using DR1900

c. H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Sample ID: PT-GAC#-S23

PT-GAC#-S11

Test ID	PT-GAC5	PT-GAC6	PT-GAC7	PT-GAC8	PT-GAC9	PT-GA10
Date	10/3/2023	10/3/2023	10/4/2023	10/4/2023	10/5/2023	10/5/2023
Start Time	12:30	15:04	9:50	10:10	9:58	14:40
End Time	12:44	14:20	10:00	10:20	10:08	14:55
Recorder	AW	AW	AW	AW	AW	AW

Target Conditions

Sample ID	PT-GAC5	PT-GAC6	PT-GAC7	PT-GAC8	PT-GAC9	PT-GA10
Trains in Operation	1, 2	1, 2	1, 2	1, 2	1, 2	1
Train Sampled for COPCs	1	1	1	1	1	1
Target Total Flow (gpm)	2,000	2,000	2,000	2,000	1,500	1,000

Operational Conditions: GAC

Units in Operation	1,2	1,2	1,2	1,2	1,2	1,2
Unit Sampled for COPCs	1	1	1	1	1	1
Flow Rate, Feed (gpm) ^a	1968	1973	1955	1956	1437	962
Lead Vessel Differential Pressure (psi) ^a	2	2	2	2	1	3
Lag Vessel Differential Pressure (psi) ^a	0	0	0	0	0	0
Bump Flow Rate	--	--	--	--	--	--
Bump Duration ^a	--	--	--	--	--	--
Influent Pressure pre-Bump ^a	--	--	--	--	--	--
Influent Pressure post-Bump ^a	--	--	--	--	--	--

Water Quality Monitoring (Grab): GAC

*Duplicate

Free Peroxide, Lead Vessel (Train 1/Train 2/Train 3)						
Port 1	2/3	2/3	2/3	2/3	2/3	2
Port 2	1/0	1/0.5	0.5/1	1/0.5	0.5/1	0.5
Port 3	0/0	0/0	0/0	0/0	0/0	0
Port 4	0/0	0/0	0/0	0/0	0/0	0
Free Peroxide, Lag Vessel (Train 1/Train 2/Train 3)						
Port 1	0/0	0/0	0/0	0/0	0/0	0
Port 2	0/0	0/0	0/0	0/0	0/0	0
Port 3	0/0	0/0	0/0	0/0	0/0	0
Port 4	0/0	0/0	0/0	0/0	0/0	0
COPCs, GAC Influent (S10)						
1,4-D (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV
VOCs, Non-Cl2 (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV
1,2,3-TCP (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV
PFAS (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV
COPCs, Lead Vessel (S23)						
1,4-D (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
COPCs, Lag Vessel (S11)						
H2O2 (Field)	0	0	0	0	0	0
1,4-D (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

a. Average of online exported data over time range of sample event.

b. H2O2 measured using DR1900

c. H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Test ID	PT-GAC11	PT-GAC12	PT-GAC13	PT-GAC14	PT-GAC15	PT-GA16
Date	10/5/2023	9/22/2023	9/22/2023	10/4/2023	10/4/2023	10/3/2023
Start Time	15:15	3:30 PM	4:15 PM	16:15	17:00	15:35
End Time	15:25	3:40 PM	4:24 PM	16:26	17:12	15:48
Recorder	AW	SS	SS	AW	AW	AW

Target Conditions

Sample ID	PT-GAC11	PT-GAC12	PT-GAC13	PT-GAC14	PT-GAC15	PT-GA16
Trains in Operation	1	1	1	1, 2	1, 2	1, 2
Train Sampled for COPCs	1	1	1	1	1	1
Target Flow (gpm)	1,000	1,000	1,000	2,000	2,000	2,000

Operational Conditions: GAC

Units in Operation	1,2	1	1	1,2	1,2	1,2
Unit Sampled for COPCs	1	1	1	1	1	1
Flow Rate, Feed (gpm) ^a	978	863	865	1960	1958	1971
Lead Vessel Differential Pressure (psi) ^a	3	3	3	3	3	3
Lag Vessel Differential Pressure (psi) ^a	0	0	0	0	0	0
Bump Flow Rate	--	--	--	--	--	--
Bump Duration ^a	--	--	--	--	--	--
Influent Pressure pre-Bump ^a	--	--	--	--	--	--
Influent Pressure post-Bump ^a	--	--	--	--	--	--

Water Quality Monitoring (Grab): GAC

Hydrogen Peroxide, Lead Vessel (Train 1/Train 2/Train 3)						
Port 1	2	3	3	2/3	2/3	1/3
Port 2	0.5	0	0	1/0.5	0.5/0.5	0/0.5
Port 3	0	0	0	0/0	0/0	0/0
Port 4	0	0	0	0/0	0/0	0/0
Hydrogen Peroxide, Lag Vessel (Train 1/Train 2/Train 3)						
Port 1	0	0	0	0/0	0/0	0/0
Port 2	0	0	0	0/0	0/0	0/0
Port 3	0	0	0	0/0	0/0	0/0
Port 4	0	0	0	0/0	0/0	0/0
COPCs, GAC Influent (S10)						
1,4-D (Weck)	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF
VOCs, Non-Cl2 (Weck)	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF
1,2,3-TCP (Weck)	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF
PFAS (Weck)	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF	*Use UV EFF
COPCs, Lead Vessel (S23)						
1,4-D (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
COPCs, Lag Vessel (S11)						
H2O2 (Field)	0	0	0	0	0	0
1,4-D (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

a. Average of online exported data over time range of sample event.

b. H2O2 measured using DR1900

c. H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Test ID	PT-GAC17	PT-GAC18	PT-GAC19	PT-GAC20		
Date	10/3/2023	10/4/2023	10/4/2023	10/4/2023		
Start Time	15:53	15:20	14:43	15:50		
End Time	16:08	15:35	14:59	16:05		
Recorder	AW	AW	AW	AW		

Target Conditions

Sample ID	PT-GAC17	PT-GAC18	PT-GAC19	PT-GAC20		
Trains in Operation	1, 2	1, 2	1, 2	1, 2		
Train Sampled for COPCs	1	1	1	1		
Target Total Flow (gpm)	2,000	2,000	2,000	2,000		

Operational Conditions: GAC

Units in Operation	1, 2	1, 2	1, 2	1, 2		
Unit Sampled for COPCs	1	1	1	1		
Flow Rate, Feed (gpm) ^a	1971	1957	1960	1960		
Lead Vessel Differential Pressure (psi) ^a	2	2	2	2		
Lag Vessel Differential Pressure (psi) ^a	0	0	0	0		
Bump Flow Rate ^a	--	--	--	--		
Bump Duration ^a	--	--	--	--		
Influent Pressure pre-Bump ^a	--	--	--	--		
Influent Pressure post-Bump ^a	--	--	--	--		

Water Quality Monitoring (Grab): GAC

Free Peroxide, Lead Vessel (Train 1/Train 2/Train 3)						
Port 1	1/3	2/3	2/3	2/3		
Port 2	0/0.5	1/0	1/1	0.5/0.5		
Port 3	0/0	0/0	0/0	0/0		
Port 4	0/0	0/0	0/0	0/0		

Free Peroxide, Lag Vessel (Train 1/Train 2/Train 3)						
Port 1	0/0	0/0	0/0	0/0		
Port 2	0/0	0/0	0/0	0/0		
Port 3	0/0	0/0	0/0	0/0		
Port 4	0/0	0/0	0/0	0/0		

COPCs, GAC Influent (S10)

1,4-D (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV		
VOCs, Non-Cl2 (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV		
1,2,3-TCP (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV		
PFAS (Weck)	*Sampled at UV	*Sampled at UV	*Sampled at UV	*Sampled at UV		

COPCs, Lead Vessel (S23)

1,4-D (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
VOCs, Non-Cl2 (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

COPCs, Lag Vessel (S11)

H2O2 (Field)	0	0	0	0		
1,4-D (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
VOCs, Non-Cl2 (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
1,2,3-TCP (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
PFAS (Weck)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Notes:

- o-xane, EPA 522 (Weck) - (2) 125 mL Amber Glass
- 1,4-Cl2, EPA 524.2 (Weck) - (3) 40 mL VOA no ascorbic
- CP, EPA 524M (Weck) - (2) 40 mL VOA no ascorbic
- PFAS, EPA 537.1 (Weck) - (2) 250 mL Poly

a. Average of online exported data over time range of sample event.

b. H2O2 measured using DR1900

c. H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

This page intentionally left blank.



Appendix B: FRRO Performance Test Hardsheet



Test ID	PT-RO1	PT-RO2	PT-RO3	PT-RO4
Date	--	2/6/2024	2/7/2024	2/6/2024
Start Time	--	9:50	12:30	11:40
End Time	--	9:50 (2/7/2024)	14:34	12:48
Recorder	--	WL	WL	WL

Target Conditions

SM-8 Flow	--	1,000	1,000	1,000
SM-9 Flow	--	0	0	0
Charnock WTP Flow	--	3,470	3,470	3,470
Arcadia Wells Flow	--	0	0	0
Bypass Percentage	--	15	15	15
Target RO Feed Flow (gpm)	--	3,800	3,800	3,800

Operational Conditions: Well Blend

SM-8 Flow	--	1,051	1,050	1,051
SM-9 Flow	--	0	0	0
Charnock WTP Flow	--	3,418	3,421	3,418
Arcadia Wells Flow	--	0	0	0
Bypass Percentage	--	15	15	15
Target RO Feed Flow (gpm)	--	3,799	3,800	3,799

Water Quality Monitoring (Grab): Sample Port (S14)

COPCs (Chlorinated)				
1,4-D (Weck)	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs, Non-Cl2 (Weck)	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (Weck)	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (Weck)	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Background Water Quality				
Odor, Color	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Metals	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dissolved Metals	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chromium6	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCP	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cl, F, SO4	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ammonia, Phosphorus	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nitrate, Nitrite	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HPC, Total Coliform	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

Odor, Color (140.1, SM2120B)	(1) 500 mL Glass
Total Metals (200.7, 200.8)	(1) 500 mL Poly with HNO3
Dissolved Metals (200.7, 200.8)	(1) 500 mL Poly
Chromium6 (218.6)	(1) 60 mL Poly
Alkalinity, TDS, Aggressive Index, CCP, Langelier (SM2320B, SM2540C)	(1) 2 L Poly
Cl, F, SO4 (300, 314)	(1) 60 mL Poly
Bromide, Bromate, Chlorate, Chlorite (300.1)	(1) 60 mL Poly
Ammonia, Phosphorus (350.1, 365.3)	(1) 500 mL Poly
Nitrate, Nitrite (353.2)	(1) 250 mL Poly
HPC, Total Coliform (SM9215, E9221 MTFT)	(1) 125 mL Poly sterile
1,4-Dioxane (522)	(2) 125 mL Amber Glass
VOCs (524.2)	(3) 40 mL VOA
1,2,3-TCP (524M)	(2) 40 mL VOA
PFAS (537.1)	(2) 250 mL Poly

Test ID	PT-RO1	PT-RO2	PT-RO3	PT-RO4
Date	-	2/6/2024	2/7/2024	2/6/2024
Start Time	-	9:50	12:30	11:40
End Time	-	9:50 (2/7/2024)	14:34	12:48
Recorder	-	WL	WL	WL

Target Conditions

Sample ID	-	PT-RO#2-S15	PT-RO#3-S15	PT-RO#4-S15
Units in Operation	-	1	1	1
Target Feed Flow (gpm)	-	1,900	1,900	1,900

Operational Conditions: FRRO

Units in Operation	-	2	3	4
Feed Flow (gpm)	-	1,899	1,901	1,900
Permeate Flow (gpm)	-	1,709	1,711	1,672
Concentrate Flow (gpm)	-	190	190	228
Recovery (%)	-	90	90	88

Water Quality Monitoring (Grab): FRRO

Feed Sample Port (S14)				
ORP, mV (Field)	-	491.6	566.6	491.6
Temperature, C (Field)	-	20.0	20.8	20.0
pH (Field)	-	6.41	6.41	6.41
Conductivity, μ S/cm (Field)	-	638	707	638
Turbidity, NTU (Field)	-	0.14	0.10	0.14
Chloramine Residual (Field)	-	0.5	0.8	0.5
SDI (Field)	-	1.29	1.35	1.29
Effluent Sample Port (S15)				
ORP, mV (Field)	-	543.2	519.3	327.3
Temperature, C (Field)	-	20.5	21.0	20.7
pH (Field)	-	5.24	5.07	5.59
Conductivity, μ S/cm (Field)	-	35.1	20.0	23.0
Turbidity, NTU (Field)	-	0.16	0.05	0.12
COPCs (Weck)	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Background Water Quality (Weck)	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Online): FRRO

Feed Sample Location (M)				
ORP, mV (Avg)	-	577	571	577
Temperature, C (Avg)	-	6.7	6.6	6.7
pH (Avg)	-	6.6	6.6	6.6
Conductivity, μ S/cm (Avg)	-	1334	1314	1334
Turbidity, NTU (Avg)	-	Not Operating	Not Operating	Not Operating
Chlorine Residual (Avg)	-	Not Operating	Not Operating	Not Operating
Ammonia Residual (Avg)	-	Not Operating	Not Operating	Not Operating
Chloramine Residual (Avg)	-	0.6	0.6	0.6
Cl:N Ratio	-	Not Operating	Not Operating	Not Operating
Effluent Sample Location (N)				
Conductivity, μ S/cm (Avg)	-	43.9	52.6	32.9

Notes:

This page intentionally left blank.



Appendix C: 7-Day Acceptance Test Hardsheet



Source Water Monitoring

Test ID	AT-SW1	AT-SW2	AT-SW3	AT-SW4
Date	2/12/2024	2/13/2024	2/14/2024	2/15/2024
Start Time	12:10	09:05		
End Time	12:39	09:30		
Recorder	HN	EG	EG	HN

Target Test Conditions

SM-8 Flow (gpm)	1,000	1,000	1,000	1,000
Olympic Target Flow (gpm)	1,000	1,000	1,000	1,000
Charnock Target Flow (gpm)	3,750	3,750	5,300	3,750
Arcadia Wells Target Flow (gpm)	230	230	230	230

Operational Conditions: Record Time of Sampling

SM-8 Flow (gpm)	1,062	1,047	1,050	1,050
Olympic Target Flow (gpm)	1,000	1,000	1,000	1,000
Charnock Target Flow (gpm) / Actual Flow	4,000 / 3,570	4,500 / 4,080	4,000 / 3538	5,300 / 5,269
Arcadia Wells Target Flow (gpm) / Actual Flow	0 / 0	0 / 0	0 / 0	0 / 0

Water Quality Monitoring (Weck Grab Samples): Greensand Feed (S4)

COPCs (Chlorinated)		09:10			
1,4-Dioxane (EPA 522)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs (EPA 524.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (EPA 524M)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (EPA 537.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Background Water Quality		12:15			
Odor, Color (140.1, SM2120B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Metals (200.7, 200.8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dissolved Metals (200.7, 200.8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chromium6 (218.6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCPP, Langelier (SM2320B, SM2540C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cl, F, SO4 (300, 314)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite (300.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ammonia, Phosphorus (350.1, 365.3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nitrate, Nitrite (353.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TOC (SM5310B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HPC, Total Coliform (SM9215, E9221 MTFT)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Grab): Charnock Feed into RO Tank (S7)

COPCs (Chlorinated)		14:50			
1,4-Dioxane (EPA 522)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs (EPA 524.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (EPA 524M)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (EPA 537.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Background Water Quality		12:10		14:50	
Odor, Color (140.1, SM2120B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Metals (200.7, 200.8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dissolved Metals (200.7, 200.8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chromium6 (218.6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCPP, Langelier (SM2320B, SM2540C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cl, F, SO4 (300, 314)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite (300.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ammonia, Phosphorus (350.1, 365.3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nitrate, Nitrite (353.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TOC (SM5310B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HPC, Total Coliform (SM9215, E9221 MTFT)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

25% = 935 gpm

Source Water Monitoring

Test ID	AT-SW5	AT-SW6	AT-SW7
Date	2/16/2024	2/17/2024	2/18/2024
Start Time	12:00	12:20	11:30
End Time	12:05	12:30	11:40
Recorder	WL	PW	WL

Target Test Conditions

SM-8 Flow (gpm)	1,000	1,000	1,000
Olympic Target Flow (gpm)	1,000	1,000	1,000
Charnock Target Flow (gpm)	3,200	3,200	1,200
Arcadia Wells Target Flow (gpm)	230	230	230

Operational Conditions: Record Time of Sampling

SM-8 Flow (gpm)	1,035	1,014	1,020
Olympic Target Flow (gpm)	1,000	1,000	1,000
Charnock Target Flow (gpm) / Actual Flow	3,500 / 3,616	3,500 / 3,559	1,280 / 1,339
Arcadia Wells Target Flow (gpm) / Actual Flow	0 / 0	0 / 0	0 / 0

Water Quality Monitoring (Weck Grab Samples): Greensand Feed (S4)

COPCs (Chlorinated)			
1,4-Dioxane (EPA 522)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs (EPA 524.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (EPA 524M)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (EPA 537.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Background Water Quality			
Odor, Color (140.1, SM2120B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Metals (200.7, 200.8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dissolved Metals (200.7, 200.8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chromium6 (218.6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCPP, Langelier (SM2320B, SM2540C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cl, F, SO4 (300, 314)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite (300.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ammonia, Phosphorus (350.1, 365.3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nitrate, Nitrite (353.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TOC (SM5310B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HPC, Total Coliform (SM9215, E9221 MTFT)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Grab): Charnock Feed into RO Tank (S7)

COPCs (Chlorinated)			
1,4-Dioxane (EPA 522)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs (EPA 524.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (EPA 524M)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (EPA 537.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Background Water Quality			
Odor, Color (140.1, SM2120B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Metals (200.7, 200.8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dissolved Metals (200.7, 200.8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chromium6 (218.6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCPP, Langelier (SM2320B, SM2540C)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cl, F, SO4 (300, 314)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite (300.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ammonia, Phosphorus (350.1, 365.3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nitrate, Nitrite (353.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TOC (SM5310B)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HPC, Total Coliform (SM9215, E9221 MTFT)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

25% = 935 gpm

Test ID	AT-GS1	AT-GS2	AT-GS3	AT-GS4
Date	2/12/2024	2/13/2024	2/14/2024	2/15/2024

Operational Conditions: Record Time of Sampling

Units in Operation	5A/ 6A	5A/ 6A	5A / 6A	5A / 6A
Flow Rate, Effluent (gpm)	521 / 533	540 / 510	540 / 516	532 / 510
Loading Rate (gpm/sf)	Calc	Calc	Calc	Calc

Water Quality Monitoring (Grab): Greensand Filters

Feed Sample Port (S4)		1420	850	940
Free Cl2 (Field)	0		0.55	0.05
Turbidity (Field)	0.51	0.26	0.26	0.18
COPC (Chlorinated)	See SW Tab	See SW Tab	See SW Tab	See SW Tab
Effluent Sample Port (S8)		1510	110	945
Fe, Total (Field)	0.00	0.02	0.02	0.01
Mn, Total (Field)	0.03	0.13	0.03	0.04
Free Cl2 (Field)	> 2.20	> 2.20	1.73	1.22
Turbidity (Field)	0.44	0.41	0.22	0.16
SDI (Field)	1.6	2.11	0.8	1.04
COPC (Chlorinated)	☒	☒ ☒	☒	☒

Water Quality Monitoring (Online): Record Time of Sampling

Feed Sample Location (C)				
Free Chlorine (Avg), field online	0.11	0.11	0.11	0.11
Turbidity (Avg), field online	0.39	0.07	0.12	0.116
Effluent Sample Location (F)				
Free Chlorine (Avg), field online		2.96	1.5	0.89
Turbidity (Avg), field online	Not in Service	Not in Service	Not in Service	Not in Service

Notes: 2/12/2024 2/13/2024 2/14/2024 2/15/2024

Field Equipment: DR1900 (Cl2, Fe, Mn), turbidimeter
Sample Bottles: COPCs (Weck), HDPE for Cle, Fe, Mn, turbidity sample
GS inf- turb, GS eff- free C12, GAC eff- free + total C12

Turbidity (2/14/24): S8 0.22 NTU 1145, S4 0.26 NTU 1145, SDI @ 1450: 0.8

Test ID	AT-GS5	AT-GS6	AT-GS7
Date	2/16/2024	2/17/2024	2/18/2024

Operational Conditions: Record Time of Sampling

Units in Operation	5A / 6A	5A / 6A	5A / 6A
Flow Rate, Effluent (gpm)	526 / 509	522 / 479	532 / 498
Loading Rate (gpm/sf)	Calc	Calc	Calc

Water Quality Monitoring (Grab): Greensand Filters 11:43 to 16:00

Feed Sample Port (S4)			
Free Cl2 (Field)	0.20		
Turbidity (Field)	0.24		
COPC (Chlorinated)	See SW Tab	See SW Tab	See SW Tab
Effluent Sample Port (S8)			
Fe, Total (Field)	0.01		
Mn, Total (Field)	0.05		
Free Cl2 (Field)	1.24		
Turbidity (Field)	0.21		
SDI (Field)	1.5		
COPC (Chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Online): Record Time of Sampling

Feed Sample Location (C)			
Free Chlorine (Avg), field online	0.10	0.10	0.09
Turbidity (Avg), field online	-	-	-
Effluent Sample Location (F)			
Free Chlorine (Avg), field online	-	-	-
Turbidity (Avg), field online	Not in Service	Not in Service	Not in Service

Notes: 2/16/2024 2/17/2024 2/18/2024

Field Equipment: DR1900 (Cl2, Fe, Mn), turbidimeter
 Sample Bottles: COPCs (Weck), HDPE for Cle, Fe, Mn, turbidity sample
 GS inf- turb, GS eff- free C12, GAC eff- free + total C12

Turbidity (2/14/24): S8 0.22 NTU 1145, S4 0.26 NTU 1145, SDI @ 1450: 0.8

Test ID	AT-UV1	AT-UV2	AT-UV3	AT-UV4	AT-UV5
Date	2/12/2024	2/13/2024	2/14/2024	2/15/2024	2/16/2024
Start Time	12:15	09:15	10:30	10:10	12:25
End Time	12:30	9:30	10:45	10:35	12:30
Recorder	WL	HN	HN	HN	WL

Target Conditions

Units in Operation	2	2	2	2	1 or 2
Mode	Auto	Auto	Auto	Auto	Auto
SM-8 Flow (gpm)	1,000	1,000	1,000	1,000	1,000
Target Flow (gpm)	1,000	1,000	1,000	1,000	1,000
Scavenging Term (s ⁻¹)	130,000	130,000	130,000	130,000	130,000
UVT (%)	ambient	ambient	ambient	ambient	ambient
pH	ambient	ambient	ambient	ambient	ambient
1,4-D Compliance Setpoint	2.4	2.4	2.4	2.4	2.4
PCE Compliance Setpoint	2.3	2.3	2.3	2.3	2.3
TCE Compliance Setpoint	2.2	2.2	2.2	2.2	2.2
1,4-D Operational Setpoint	2.64	2.64	2.64	2.64	2.64
PCE Operational Setpoint	2.53	2.53	2.53	2.53	2.53
TCE Operational Setpoint	2.42	2.42	2.42	2.42	2.42

Operational Conditions: Record at HDMI Screen

Unit in Operation	UV2	UV2	UV2	UV2	UV2
Mode	Auto	Auto	Auto	Auto	Auto
SM-8 Flow (gpm)	1067.99	1060	1050	1050	1014
Target Flow (gpm)	1,150	1,150	1,150	1,150	1,150
1,4-D Log Setpoint/Operational	2.7	2.76	2.7	2.7	2.7
PCE Log Setpoint/Operational	2.8	2.82	2.8	2.8	2.8
TCE Log Setpoint/Operational	2.6	2.89	2.6	2.6	2.6
Scavenging Term (s ⁻¹)	130,000	130,000	130,000	130,000	130,000
Lamp Sections	7	7	7	7	7
Lamp Power	57.5%%	55.5%	55.5%	55.5%	55.5%
Lamp age (hr)	1117	1192	1216	1234	1238
Sensor Intensity					
Section 1	4.19	4.12	4.10	4.12	4.03
Section 2	0.26	-	-	-	0.29
Section 3	4.43	4.32	4.30	4.31	4.29
Section 4	4.8	4.72	4.74	4.69	4.42
Section 5	4.52	4.42	4.38	4.42	4.38
Section 6	0.24	-	-	-	0.24
Section 7	0.12	-	-	-	0.12
Section 8	0.36	-	-	-	0.37
Section 9	5.03	4.91	4.90	4.89	4.88
Section 10	5.45	5.37	5.35	5.36	5.35
Section 11	5.18	5.04	5.00	4.96	4.92
Peroxide Cost (\$/L)					
Energy Cost (\$/kwh)					
Predicted 1,4-D Removal	2.79	2.76	2.77	2.75	2.76
Predicted PCE Removal	2.82	2.82	2.83	2.82	2.82
Predicted TCE Removal	2.91	2.89	2.90	2.89	2.90
Influent Pressure (psi)	20	20			19.5
Effluent Pressure (psi)	20	20			19.5
H ₂ O ₂ Setpoint / Actual (mg/L)	28.19	25.29	27.7	26.53	25.34
H ₂ O ₂ Injection Rate (gph)	3.01	2.89	3.02	2.83	2.80
H ₂ O ₂ est. Concentration (mg/L)	10.57	10.65	10.6	10.53	10.68

a. Average of online exported data over time range of sample event.

b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Sample ID: AT-UV#-S10

Water Quality Monitoring (Grab): UV-AOP

UV-AOP Pre H2O2	AT-UV1	AT-UV2	AT-UV3	AT-UV4	AT-UV5
UVT (Field)	99.8%	97.3%	97.6%	-	99.8%
UV-AOP Feed (S9)			Dipsticks		
H ₂ O ₂ (DR1900)	0.183	0.034	15	15	10
UVT (Field)	97.4%	96.2%	95.5%	95.5%	95.2
pH (Field)	6.86	6.91	6.88	6.94	6.86
UV-AOP Effluent (S10)			1030		
H2O2 (DR1900)	0.183	0.056	10	8	5
UVT (Field)	97.40%	98.9%	97.8%	97.6%	98.9
pH (Field)	6.86	6.92	6.89	6.95	6.89
COPCs (Non-chlorinated)	☒ ☒	☒	☒	☒ ☒	☒

Water Quality Monitoring (Online): Record time of sampling

UV-AOP Feed (G)					
UVT (online)	96.77%	96.87%	97.60%	97.50%	97.00%
pH (online)	6.08	5.8	5.8	5.64	6.08

Notes:

Field Equipment: RealTech UVT Meter, pH Probe, DR1900 (H2O2)

Sample Bottles: COPCs (Weck), HDPE for H2O2 sample

Test ID	AT-UV6	AT-UV7
Date	2/17/2024	2/18/2024
Start Time	11:55	11:05
End Time	12:00	11:10
Recorder	PW	WL

Target Conditions

Units in Operation	1 or 2	1 or 2
Mode	Auto	Auto
SM-8 Flow (gpm)	1,000	1,000
Target Flow (gpm)	1,000	1,000
Scavenging Term (s ⁻¹)	130,000	130,000
UVT (%)	ambient	ambient
pH	ambient	ambient
1,4-D Compliance Setpoint	2.4	2.4
PCE Compliance Setpoint	2.3	2.3
TCE Compliance Setpoint	2.2	2.2
1,4-D Operational Setpoint	2.64	2.64
PCE Operational Setpoint	2.53	2.53
TCE Operational Setpoint	2.42	2.42

Operational Conditions: Record at HDMI Screen

Unit in Operation	UV1	UV2
Mode	Auto	Auto
SM-8 Flow (gpm)	1014	1020
Target Flow (gpm)	1,150	1,150
1,4-D Log Setpoint/Operational	2.7	2.7
PCE Log Setpoint/Operational	2.8	2.8
TCE Log Setpoint/Operational	2.6	2.6
Scavenging Term (s ⁻¹)	130,000	130,000
Lamp Sections	7	7
Lamp Power	-	55.5%
Lamp age (hr)	-	1316
Sensor Intensity		
Section 1	4.9	4.13
Section 2	0.29	0.3
Section 3	4.3	4.29
Section 4	4.69	4.71
Section 5	4.39	4.37
Section 6	0.24	0.24
Section 7	0.12	0.12
Section 8	0.36	0.37
Section 9	4.92	4.86
Section 10	5.38	5.35
Section 11	4.91	4.89
Peroxide Cost (\$/L)		
Energy Cost (\$/kwh)		
Predicted 1,4-D Removal	2.77	2.77
Predicted PCE Removal	2.82	2.82
Predicted TCE Removal	2.90	2.90
Influent Pressure (psi)	20	20.5
Effluent Pressure (psi)	20	20.5
H ₂ O ₂ Setpoint / Actual (mg/L)	26.93	26.83
H ₂ O ₂ Injection Rate (gph)	2.81	2.75
H ₂ O ₂ est. Concentration (mg/L)	10.75	10.67

required actual 25.75 mg/L

- a. Average of online exported data over time range of sample event.
- b. 1,4-dioxane samples collected in duplicate (i.e., 4 total bottles)

Water Quality Monitoring (Grab): UV-AOP

UV-AOP Pre H2O2	AT-UV6	AT-UV7
UVT (Field)	97.7%	97.6
UV-AOP Feed (S9)		
H ₂ O ₂ (DR1900)	20	10
UVT (Field)	94.5	95.5
pH (Field)	6.66	6.92
UV-AOP Effluent (S10)		
H2O2 (DR1900)	8	3
UVT (Field)	98.6	94.8
pH (Field)	6.74	6.97
COPCs (Non-chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Online): Record time of sampling

UV-AOP Feed (G)		
UVT (online)	97.4	97%
pH (online)	5.7	5.8

Notes:

Field Equipment: RealTech UVT Meter, pH Probe, DR1900 (H2O2)

Sample Bottles: COPCs (Weck), HDPE for H2O2 sample

Test ID	AT-GAC1	AT-GAC2	AT-GAC3	AT-GAC4
Date	2/12/2024	2/13/2024	2/14/2024	2/15/2024
Start Time	12:40	9:40	8:40	9:50
End Time	13:40	10:00	9:00	10:10
Recorder	EG	EG	EG	EG

Target Conditions

Trains in Operation	1,2 2,3	1,2 2,3	2,3 1,2	2,3 1,2
Train Sampled	1 2	1 2	2 1	2 1
Target Total Flow (gpm)	1,000	1,000	1,000	1,000

Operational Conditions: Record at time of sample collection (train#/train#)

Trains in Operation	2 / 3	2 / 3	1 / 2	1 / 2
Flow Rate, Feed (gpm)	520 / 530	520 / 530	529 / 527	520 / 530
Flow Rate, Effluent (gpm)	520 / 530	520 / 530	529 / 527	520 / 530
Loading Rate (gpm/sf)	Calc	Calc	Calc	Calc
Lead Vessel Differential Pressure (psi)	0.0 / 0.0	0.0 / 0.0	0.1 / 0	0.08 / 0
Lag Vessel Differential Pressure (psi)	0.0 / 6.6	0.0 / 8.5	7.52 / 0	8.14 / 0
EBCT (min)	Calc	Calc	Calc	Calc
Vessel Positions	Calc	Calc	Calc	Calc
Bump Flow Rate	-	-	-	-
Bump Duration ^a	-	-	-	-
Influent Pressure pre-Bump ^a	-	-	-	-
Influent Pressure post-Bump ^a	-	-	-	-

Water Quality Monitoring (Grab): GAC

Hydrogen Peroxide (dip stick), Lead Vessel EFF				
Train 1	-	-	ND	ND
Train 2	0	ND	ND	ND
Train 3	ND	ND	-	-
Train 4	-	-	-	-
Hydrogen Peroxide (dip stick), Lag Vessel EFF				
Train 1	-	-	ND	ND
Train 2	ND	ND / 0	ND	ND
Train 3	ND	ND / 0	-	-
Train 4	-	-	-	-
COPCs (Non-chlorinated), Lead Vessel (S23) 0945				
1,4-Dioxane (EPA 522)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs (EPA 524.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (EPA 524M)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (EPA 537.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
COPCs (Non-chlorinated Chlorinated), Combined GAC Effluent (S11)				
1,4-Dioxane (EPA 522)	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs (EPA 524.2)	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (EPA 524M)	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (EPA 537.1)	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

Field Equipment: DR1900 (H2O2), H2O2 strips

Sample Bottles: COPCs (Weck), HDPE for H2O2 sample

2/15/2024 - Asked Walsh to verify calibration of GAC DP instrumentation (PDIT). GAC 1 lead: dP: 19 feed - 8.5 effluent

lag: 19 feed - 20 effluent (?) GAC 2 lead: 18 feed - 9 effluent lag: 18 feed - 17.5 effluent

2/18/24: Sampled 4 lead + comb eff.; Need to redo 1 + 3 for lead (vessel order switched)

a. Average of online exported data over time range of sample event.

b. H2O2 measured using DR1900

c. H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Test ID	AT-GAC5	AT-GAC6	AT-GAC7
Date	2/16/2024	2/17/2024	2/18/2024
Start Time	12:30	11:55	11:30
End Time	12:50	12:40	11:45
Recorder	WL	PW	WL

Target Conditions

Trains in Operation	3,4	3,4	3,4
Train Sampled	3	4	4
Target Total Flow (gpm)	1,000	1,000	1,000

Also collected COPC samples from GAC 1 and 3

Operational Conditions: Record at time of sample collection (train#/train#)

Trains in Operation	3 / 4	3 / 4	3 / 4
Flow Rate, Feed (gpm)	485 / 535	494 / 508	526 / 532
Flow Rate, Effluent (gpm)	485 / 535	494 / 508	526 / 532
Loading Rate (gpm/sf)	Calc	Calc	Calc
Lead Vessel Differential Pressure (psi)			
Lag Vessel Differential Pressure (psi)			
EBCT (min)	Calc	Calc	Calc
Vessel Positions	Calc	Calc	Calc
Bump Flow Rate	-	-	-
Bump Duration ^a	-	-	-
Influent Pressure pre-Bump ^a	-	-	-
Influent Pressure post-Bump ^a	-	-	-

*SCADA

*SCADA

Water Quality Monitoring (Grab): GAC

Hydrogen Peroxide (dip stick), Lead Vessel EFF			
Train 1	-	-	-
Train 2	-	-	-
Train 3	ND	ND	ND
Train 4	ND	ND	ND
Hydrogen Peroxide (dip stick), Lag Vessel EFF			
Train 1	-	-	-
Train 2	-	-	-
Train 3	ND	ND	ND
Train 4	ND	ND	ND
COPCs (Non-chlorinated), Lead Vessel (S23)			
1,4-Dioxane (EPA 522)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs (EPA 524.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (EPA 524M)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (EPA 537.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
COPCs (Non-chlorinated Chlorinated), Combined GAC Effluent (S11)			
1,4-Dioxane (EPA 522)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOCs (EPA 524.2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1,2,3-TCP (EPA 524M)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PFAS (EPA 537.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

a. Average of online exported data over time range of sample event.

b. H2O2 measured using DR1900

c. H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Sample ID: AT-GAC#-S23

AT-GAC#-S11

Test ID	AT-RO1	AT-RO2	AT-RO3	AT-RO4	AT-RO5
Date	2/12/2024	2/13/2024	2/14/2024	2/15/2024	2/16/2024
Start Time	12:30pm	11:10am	5:30pm	11:15am	13:00
End Time	12:45pm	11:20am	6:00pm	11:30am	13:10
Recorder	HN	EG	HN	HN	WL

Target Conditions

Trains in Operation	3, 4	3,4 2,3	2,3,4 2,4	2,4-2,3,4	3,4
SM-8 Flow (gpm)	1,000	1,000	1,000	1,000	1,000
Olympic Target Flow (gpm)	1,000	1,000	1,000	1,000	1,000
Charnock Target Flow (gpm)	3,750	3,750	5,300	3,750	3,200
Arcadia Wells Target Flow (gpm)	230	230	230	230	230

Operational Conditions: Record at time of sampling

Trains in Operation (Train 2/Train 3/Train 4)	3 / 4	2 / 3	2 / 4	2 / 3 / 4	3 / 4
Flow Rate, Feed (gpm)	1905 / 1906	1899 / 1912	1900 / 1896	1900 / 1905 / 1896	1895 / 1893
Flow Rate, Permeate (gpm)	1710 / 1719	1706 / 1709	1701 / 1714	1701 / 1700 / 1714	1707 / 1702
Flow Rate, Concentrate (gpm)	183 / 188	196 / 190	197 / 190	197 / 193 / 190	188 / 191
Recovery (%)	90.4 / 90.0	89.7 / 90.1	90.0 / 90.0	90.0 / 90.0 / 90.0	90.0 / 89.9

Water Quality Monitoring (Grab): RO

RO Feed (S14)		1505			
SDI (Field)	1.38	1.55	1.42	1.45	1.31
COPC (Chlorinated)	☒	☒	☒	☒	☒ ☒
RO Permeate (S24)					
COPC (Chlorinated)	☒	☒	☒	☒	☒ ☒

Water Quality Monitoring (Online): Record at time of sample

RO Feed Tank (K, cartridge filter influent)					
ORP	583 / 603	577	581	570	579
Turbidity	0.015	0.07	0.05	0.05	0.07
Ammonia Residual	0	0	0	0	0
Chloramine residual	4.51	4.95	0	0	0
Chlorine to Ammonia N Ratio	1.02	1.02	25.17	1.01	0
RO Feed (M/N) (M= S14 at cartridge filter eff, N= at RO skids)					
ORP	583 / 603	577 / 590	581 / 602	588 / 590	579 / 592
Temperature	68.5 / 69.1	70.8 / 69.5	70.9 / 70.5	71 / 69.8 / 70.4	69.9 / 70.5
pH (M)	6.6	6.76 / 6.63	6.6	6.59	6.6
Conductivity (M)	1377.7	1475 / 1477	1399	1422	1263
Turbidity (M)	0.07	0.07	0.07	0.08	0.07
Free chlorine residual (M)	0.23	0.27	0.23	0.20	0
Chloramine residual	0.76	0.99	0.65	0.97	0.73

Notes:

Field Equipment: SDI

Sample Bottles: COPCs (Weck), HDPE for SDI sample

Day 4 SDI: 1:28 to fill (1), 1:50 to fill (2)

- Average of online exported data over time range of sample event.
- H2O2 measured using DR1900
- H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Sample ID: AT-RO#-S24

AT-RO#-S14

Test ID	AT-RO6	AT-RO7
Date	2/17/2024	2/18/2024
Start Time	10:50	10:45
End Time	10:55	10:50
Recorder	PW	WL

Target Conditions

Trains in Operation	2,4	4 2
SM-8 Flow (gpm)	1,000	1,000
Olympic Target Flow (gpm)	1,000	1,000
Charnock Target Flow (gpm)	3,200	1,200
Arcadia Wells Target Flow (gpm)	230	230

Operational Conditions: Record at time of sampling

Trains in Operation (Train 2/Train 3/Train 4)	2 / 4	2
Flow Rate, Feed (gpm)	1900 / 1898	1900
Flow Rate, Permeate (gpm)	1708 / 1710	1715
Flow Rate, Concentrate (gpm)	192 / 188	185
Recovery (%)	89.9 / 90.0	90.2

Water Quality Monitoring (Grab): RO

RO Feed (S14)		
SDI (Field)	<input type="checkbox"/>	<input type="checkbox"/>
COPC (Chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
RO Permeate (S24)		
COPC (Chlorinated)	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Online): Record at time of sample

RO Feed Tank (K, cartridge filter influent)		
ORP	543	549
Turbidity	0.09	0.09
Ammonia Residual	0	0
Chloramine residual	0	0
Chlorine to Ammonia N Ratio	0	0
RO Feed (M/N) (M= S14 at cartridge filter eff, N= at RO skids)		
ORP		
Temperature	68.9 / 70.3	70.9
pH (M)	6.59	6.6
Conductivity (M)	1360	1309
Turbidity (M)	0.09	0.09
Free chlorine residual (M)	0.14	0.14
Chloramine residual	0.67	0.58

Notes:

Field Equipment: SDI

Sample Bottles: COPCs (Weck), HDPE for SDI sample

Day 4 SDI: 1:28 to fill (1), 1:50 to fill (2)

- a. Average of online exported data over time range of sample event.
- b. H2O2 measured using DR1900
- c. H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Test ID	AT-DEC1	AT-DEC2	AT-DEC3	AT-DEC4	AT-DEC5
Date	2/12/2024	2/13/2024	2/14/2024	2/15/2024	2/16/2024
Start Time	13:05	12:00	14:35	11:35	13:10
End Time	13:15	12:10	14:45	11:45	13:20
Recorder	HN	HN	HN	HN	WL

Target Conditions

Trains in Operation	± 1,2	± 1,2	± 1,2	± 1,2	± 1,2
SM-8 Flow (gpm)	1,000	1,000	1,000	1,000	1,000
Olympic Target Flow (gpm)	1,000	1,000	1,000	1,000	1,000
Charnock Target Flow (gpm)	3,750	3,750	5,300	5,300	3,200
Arcadia Wells Target Flow (gpm)	230	230	230	230	230

Operational Conditions: Record at time of sample

Trains in Operation	1,2	1,2	1,2	1,2	1,2
Flow Rate, Feed (gpm)	4,232	4,121	3,563	5,630	4,272
Liquid Loading Rate (gpm/sf)	Calc	Calc	Calc	Calc	Calc
Blower Speed	Constant	Constant	Constant	Constant	Constant

Water Quality Monitoring (Grab): Decarb

Decarb Feed (S18)	1200				
COPCs (Chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Decarb Effluent (S19)	1145				
pH (Field)	7.93	7.68	7.44	7.36	7.53
Turbidity (Field)	0.42	0.49	0.11	0.05	0.14
COPCs (Chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

Field Equipment: turbidimeter, pH probe

Sample Bottles: COPCs (Weck), HDPE for turbidity sample

3 ROs: 137 bypass (745-11)

- Average of online exported data over time range of sample event.
- H2O2 measured using DR1900
- H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Sample ID: AT-DEC#-S18
AT-DEC#-S19

Test ID	AT-DEC6	AT-DEC7
Date	2/17/2024	2/18/2024
Start Time	11:00	10:30
End Time	11:40	10:40
Recorder	PW	WL

Target Conditions

Trains in Operation	2,1,2	2,1,2
SM-8 Flow (gpm)	1,000	1,000
Olympic Target Flow (gpm)	1,000	1,000
Charnock Target Flow (gpm)	3,200	1,200
Arcadia Wells Target Flow (gpm)	230	230

Operational Conditions: Record at time of sample

Trains in Operation	1,2	1,2
Flow Rate, Feed (gpm)	4,193	2,174
Liquid Loading Rate (gpm/sf)	Calc	Calc
Blower Speed	Constant	Constant

Water Quality Monitoring (Grab): Decarb

Decarb Feed (S18)		
COPCs (Chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Decarb Effluent (S19)		
pH (Field)	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity (Field)	<input type="checkbox"/>	<input type="checkbox"/>
COPCs (Chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Notes:

Field Equipment: turbidimeter, pH probe
 Sample Bottles: COPCs (Weck), HDPE for turbidity sample
 3 ROs: 137 bypass (745-11)

- a. Average of online exported data over time range of sample event.
- b. H2O2 measured using DR1900
- c. H2O2 measured using Test Strips until ND. Lag Vessel Effluent (S11) must always be tested.

Test ID	AT-RES1	AT-RES2	AT-RES3	AT-RES4
Date	2/12/2024	2/13/2024	2/14/2024	2/15/2024
Start Time	13:30	12:30	15:25	11:50
End Time	13:50	12:50	15:45	12:10
Recorder	HN	HN	HN	HN

Target Conditions

SM-8 Flow (gpm)	1,000	1,000	1,000	1,000
Olympic Target Flow (gpm)	1,000	1,000	1,000	1,000
Charnock Target Flow (gpm)	4,000	4,000	4,000	5,300
Arcadia Wells Target Flow (gpm)	230	230	230	230

Operational Conditions: Record at time of sampling 25% bypass 20% bypass (766 gpm)

SM-8 Flow (gpm)	1,059	1,028	1,050	1,046
Olympic Target Flow (gpm)	1,000	1,000	1,000	1,000
Charnock Target Flow (gpm) / Actual Flow	4,000	4000 / 3689	3,538	5,269
Arcadia Wells Target Flow (gpm)	0	0	0	0

Water Quality Monitoring (Grab): Finished Water (S22)

COPCs (Chlorinated)		Sampled 2/15		
COPCs (Chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
EPA 537.1 FRB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Background Water Quality		Sampled 2/15		
Odor, Color	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Metals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dissolved Metals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chromium6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCPP, Langelier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cl, F, SO4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ammonia, Phosphorus	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nitrate, Nitrite	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TOC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HPC, Total Coliform	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DDW Drinking Water Standards		Sampled 2/15		
Inorganic Chemicals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Organic Chemicals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Radionuclides	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Disinfection Byproducts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lead and Copper	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Secondary Drinking Water Standards	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Compounds with NLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
EPA 524.2 TB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
EPA 533 FRB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Online): Record time of sampling

Finished Water	AT-SW1	AT-SW2	AT-SW3	AT-SW4
Turbidity (NTU)	0.23	0.23	0.23	0.23
Temperature (deg F)	72.06	72.26	72.08	72.1
Conductivity (us/cm)	416	376.02	356	292.05
Total Chlorine residual (mg/L)	4.59	3.86	4.14	3.98
pH	8.38	8.41	8.56	8.25
Fluoride (mg/L)	0.82	0.82	0.86	0.82
Ammonia residual (mg/L)	Not in Service	Not in Service	Not in Service	Not in Service
Monochloramine residual (mg/L)	Not in Service	Not in Service	Not in Service	Not in Service

Notes

Test ID	AT-RES5	AT-RES6	AT-RES7
Date	2/16/2024	2/17/2024	2/18/2024
Start Time	13:35	11:20	9:55
End Time	13:55	11:40	10:15
Recorder	WL	PW	WL

Target Conditions

SM-8 Flow (gpm)	1,000	1,000	1,000
Olympic Target Flow (gpm)	1,000	1,000	1,000
Charnock Target Flow (gpm)	3,500	3,500	1,280
Arcadia Wells Target Flow (gpm)	230	230	230

Operational Conditions: Record at time of sampling

SM-8 Flow (gpm)	1,056	1,042	1,040
Olympic Target Flow (gpm)	1,000	1,000	1,000
Charnock Target Flow (gpm) / Actual Flow	3,076	3,295	1,220
Arcadia Wells Target Flow (gpm)	0	0	0

Water Quality Monitoring (Grab): Finished Water (S22)

COPCs (Chlorinated)			
COPCs (Chlorinated)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
EPA 537.1 FRB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Background Water Quality			
Odor, Color	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Metals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dissolved Metals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chromium6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity, TDS, Aggressive Index, CCPP, Langelier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cl, F, SO4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bromide, Bromate, Chlorate, Chlorite	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ammonia, Phosphorus	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nitrate, Nitrite	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TOC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HPC, Total Coliform	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DDW Drinking Water Standards			
Inorganic Chemicals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Organic Chemicals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Radionuclides	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Disinfection Byproducts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lead and Copper	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Secondary Drinking Water Standards	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Compounds with NLS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
EPA 524.2 TB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
EPA 533 FRB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water Quality Monitoring (Online): Record time of sampling

Finished Water	AT-SW5	AT-SW6	AT-SW7
Turbidity (NTU)	0.23	0.23	0.23
Temperature (deg F)	72.4	72.1	72.1
Conductivity (us/cm)	345	287	353
Total Chlorine residual (mg/L)	3.97	3.91	3.84
pH	8.51	8.72	8.75
Fluoride (mg/L)	0.83	0.82	0.83
Ammonia residual (mg/L)	Not in Service	Not in Service	Not in Service
Monochloramine residual (mg/L)	Not in Service	Not in Service	Not in Service

Notes

This page intentionally left blank.



Appendix D: Weck Laboratory Reports



Work Orders: 3121078

Project: City of Santa Monica additional testing

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/27/2023

Received Date: 09/21/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

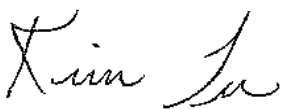
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 9/21/23 with the Chain-of-Custody document. The samples were received in good condition, at 14.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
 11/27/2023 18:04

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
Storm Drain	SS	3I21078-01	Water	09/21/23 13:50	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

Sample: Storm Drain Sampled: 09/21/23 13:50 by SS
3I21078-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2510B				Instr: AA02			
Batch ID: W311878	Preparation: _NONE (WETCHEM)			Prepared: 09/22/23 17:28		Analyst: mes	
Specific Conductance (EC)	1000	1.1	2.0	umhos/cm	1	09/25/23	
Method: SM 2540D				Instr: OVEN15			
Batch ID: W312177	Preparation: _NONE (WETCHEM)			Prepared: 09/27/23 08:46		Analyst: mes	
Total Suspended Solids	0.5		5	mg/l	1	09/27/23	J
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W311869	Preparation: _NONE (WETCHEM)			Prepared: 09/22/23 16:54		Analyst: mes	
pH	8.18	0.10	0.10	pH Units	1	09/22/23 18:09	*

Metals by EPA 200 Series Methods

Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W311926	Preparation: EPA 200.2			Prepared: 09/25/23 12:55		Analyst: tyc	
Cadmium, Total	ND	0.042	0.20	ug/l	1	09/26/23	
Copper, Total	ND	0.23	0.50	ug/l	1	09/26/23	
Lead, Total	ND	0.083	0.20	ug/l	1	09/26/23	
Silver, Total	ND	0.055	0.20	ug/l	1	09/26/23	
Zinc, Total	ND	1.7	10	ug/l	1	09/26/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B				Instr: INC12			
Batch ID: W311813	Preparation: _NONE (MICROBIOLOGY)			Prepared: 09/21/23 17:26		Analyst: rea	
Total Coliform	ND	1.8	1.8	MPN/100mL	1	09/23/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W311948	Preparation: EPA 5030B			Prepared: 09/25/23 11:43		Analyst: cam	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/25/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/25/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/25/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	09/25/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/25/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain
3I21078-01 (Water)

Sampled: 09/21/23 13:50 by SS
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	ND	0.27	0.50	ug/l	1	09/25/23	
Chloromethane	0.58	0.23	0.50	ug/l	1	09/25/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain
3I21078-01 (Water)

Sampled: 09/21/23 13:50 by SS
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W311948

Preparation: EPA 5030B

Prepared: 09/25/23 11:43

Analyst: cam

n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	ND		0.50	ug/l	1	09/25/23	
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	09/25/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	94%	Conc: 47.1	70-130			09/25/23	
4-Bromofluorobenzene	94%	Conc: 47.0	70-130			09/25/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
 11/27/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain Sampled: 09/21/23 13:50 by SS
 3I21078-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3K0147		Preparation: EPA 508.1/SPE		Prepared: 11/02/23 08:26			Analyst: ajc
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/15/23	O-08
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Alachlor	ND	0.026	0.20	ug/l	1	11/15/23	O-08
Aldrin	ND	0.0040	0.010	ug/l	1	11/15/23	O-08
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/15/23	O-08
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/15/23	O-08
Aroclor 1016	ND	0.048	0.10	ug/l	1	11/15/23	O-08
Aroclor 1221	ND	0.044	0.10	ug/l	1	11/15/23	O-08
Aroclor 1232	ND	0.064	0.10	ug/l	1	11/15/23	O-08
Aroclor 1242	ND	0.070	0.10	ug/l	1	11/15/23	O-08
Aroclor 1248	ND	0.049	0.10	ug/l	1	11/15/23	O-08
Aroclor 1254	ND	0.068	0.10	ug/l	1	11/15/23	O-08
Aroclor 1260	ND	0.076	0.10	ug/l	1	11/15/23	O-08
beta-BHC	ND	0.0045	0.010	ug/l	1	11/15/23	O-08
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/15/23	O-08
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/15/23	O-08
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
delta-BHC	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Dieldrin	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/15/23	O-08
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Endrin	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/15/23	O-08
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/15/23	O-08
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/15/23	O-08
Heptachlor	ND	0.0031	0.010	ug/l	1	11/15/23	O-08
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/15/23	O-08
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/15/23	O-08
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/15/23	O-08

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
 11/27/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain
 3I21078-01RE1 (Water) Sampled: 09/21/23 13:50 by SS
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)							
Method: EPA 508.1				Instr: GC08			
Batch ID: W3K0147		Preparation: EPA 508.1/SPE		Prepared: 11/02/23 08:26		Analyst: ajc	
Kepone	ND	0.038	0.20	ug/l	1	11/15/23	O-08
Methoxychlor	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Mirex	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
PCBs, Total	ND	0.048	0.50	ug/l	1	11/15/23	O-08
Propachlor	ND	0.045	0.20	ug/l	1	11/15/23	O-08
Toxaphene	ND	0.37	1.0	ug/l	1	11/15/23	O-08
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/15/23	O-08
Trifluralin	ND	0.0043	0.010	ug/l	1	11/15/23	O-08

Surrogate(s)
 4,4-Dibromobiphenyl 105% Conc: 0.108 70-130 11/15/23

Sample Results

Aquatic Bioassay & Consulting Labs, Inc. ELAP #1907, Non-NELAP

Sample: Storm Drain
 3I21078-01 (Water) Sampled: 09/21/23 13:50 by SS

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Subcontracted Analyses							
Method: EPA-821-R-02-012		Batch ID: 15-2015-0810		Prepared: 09/22/23 14:29		Analyst: _SUB	
Fish Bioassay, Acute toxicity	100			% Survival	1	09/26/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W312034 - EPA 508.1											
Blank (W312034-BLK1)						Prepared: 09/26/23 Analyzed: 10/20/23					
2,4'-DDD	ND	0.0030	0.010	ug/l							
2,4'-DDE	ND	0.0030	0.010	ug/l							
2,4'-DDT	ND	0.0030	0.010	ug/l							
4,4'-DDD	ND	0.0030	0.010	ug/l							
4,4'-DDE	ND	0.0040	0.010	ug/l							
4,4'-DDT	ND	0.0030	0.010	ug/l							
Alachlor	ND	0.026	0.20	ug/l							
Aldrin	ND	0.0040	0.010	ug/l							
alpha-BHC	ND	0.0015	0.010	ug/l							
alpha-Chlordane	ND	0.0031	0.010	ug/l							
Aroclor 1016	ND	0.048	0.10	ug/l							
Aroclor 1221	ND	0.044	0.10	ug/l							
Aroclor 1232	ND	0.064	0.10	ug/l							
Aroclor 1242	ND	0.070	0.10	ug/l							
Aroclor 1248	ND	0.049	0.10	ug/l							
Aroclor 1254	ND	0.068	0.10	ug/l							
Aroclor 1260	ND	0.076	0.10	ug/l							
beta-BHC	ND	0.0045	0.010	ug/l							
Chlordane (tech)	ND	0.067	0.10	ug/l							
Chlorothalonil	ND	0.0040	0.050	ug/l							
cis-Nonachlor	ND	0.0030	0.010	ug/l							
delta-BHC	ND	0.0030	0.010	ug/l							
Dieldrin	ND	0.0030	0.010	ug/l							
Endosulfan I	ND	0.0030	0.010	ug/l							
Endosulfan II	ND	0.0019	0.010	ug/l							
Endosulfan sulfate	0.00444	0.0030	0.010	ug/l							J
Endrin	ND	0.0030	0.010	ug/l							
Endrin aldehyde	ND	0.0040	0.010	ug/l							
Endrin ketone	ND	0.0042	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l							
gamma-Chlordane	ND	0.0074	0.010	ug/l							
Heptachlor	ND	0.0031	0.010	ug/l							
Heptachlor epoxide	ND	0.0019	0.010	ug/l							
Hexachlorobenzene	ND	0.0019	0.050	ug/l							
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l							
Kepone	ND	0.038	0.20	ug/l							
Methoxychlor	0.00406	0.0030	0.010	ug/l							J
Mirex	ND	0.0030	0.010	ug/l							
PCBs, Total	ND	0.048	0.50	ug/l							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:

11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W312034 - EPA 508.1 (Continued)											
Blank (W312034-BLK1)						Prepared: 09/26/23 Analyzed: 10/20/23					
Propachlor	ND	0.045	0.20	ug/l							
Toxaphene	ND	0.37	1.0	ug/l							
trans-Nonachlor	ND	0.0020	0.010	ug/l							
Trifluralin	ND	0.0043	0.010	ug/l							
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0492			ug/l	0.100		49	70-130			
LCS (W312034-BS1)						Prepared: 09/26/23 Analyzed: 10/20/23					
4,4'-DDD	0.0758	0.0030	0.010	ug/l	0.100		76	70-130			
4,4'-DDE	0.0665	0.0040	0.010	ug/l	0.100		67	70-130			
4,4'-DDT	0.0843	0.0030	0.010	ug/l	0.100		84	70-130			
Aldrin	0.0182	0.0040	0.010	ug/l	0.100		18	70-130			
alpha-BHC	0.0760	0.0015	0.010	ug/l	0.100		76	70-130			
alpha-Chlordane	0.0765	0.0031	0.010	ug/l	0.100		77	70-130			
beta-BHC	0.0744	0.0045	0.010	ug/l	0.100		74	70-130			
delta-BHC	0.0754	0.0030	0.010	ug/l	0.100		75	70-130			
Dieldrin	0.0739	0.0030	0.010	ug/l	0.100		74	70-130			
Endosulfan I	0.0705	0.0030	0.010	ug/l	0.100		70	70-130			
Endosulfan II	0.0768	0.0019	0.010	ug/l	0.100		77	70-130			
Endosulfan sulfate	0.0720	0.0030	0.010	ug/l	0.100		72	70-130			
Endrin	0.0555	0.0030	0.010	ug/l	0.100		55	70-130			
Endrin aldehyde	0.0557	0.0040	0.010	ug/l	0.100		56	70-130			
Endrin ketone	0.0921	0.0042	0.010	ug/l	0.100		92	70-130			
gamma-BHC (Lindane)	0.0773	0.0030	0.010	ug/l	0.100		77	70-130			
gamma-Chlordane	0.0771	0.0074	0.010	ug/l	0.100		77	70-130			
Heptachlor	0.0731	0.0031	0.010	ug/l	0.100		73	70-130			
Heptachlor epoxide	0.0772	0.0019	0.010	ug/l	0.100		77	70-130			
Methoxychlor	0.101	0.0030	0.010	ug/l	0.100		101	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0580			ug/l	0.100		58	70-130			
LCS (W312034-BS2)						Prepared: 09/26/23 Analyzed: 10/20/23					
4,4'-DDD	ND	0.0030	0.010	ug/l				70-130			
4,4'-DDE	ND	0.0040	0.010	ug/l				70-130			
4,4'-DDT	0.0359	0.0030	0.010	ug/l				70-130			
Aldrin	0.0141	0.0040	0.010	ug/l				70-130			
alpha-BHC	ND	0.0015	0.010	ug/l				70-130			
alpha-Chlordane	ND	0.0031	0.010	ug/l				70-130			
beta-BHC	0.0308	0.0045	0.010	ug/l				70-130			
delta-BHC	ND	0.0030	0.010	ug/l				70-130			
Dieldrin	0.00419	0.0030	0.010	ug/l				70-130			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3I2034 - EPA 508.1 (Continued)											
LCS (W3I2034-B52)						Prepared: 09/26/23 Analyzed: 10/20/23					
Endosulfan I	ND	0.0030	0.010	ug/l				70-130			
Endosulfan II	0.0274	0.0019	0.010	ug/l				70-130			
Endosulfan sulfate	0.00424	0.0030	0.010	ug/l				70-130			J
Endrin	ND	0.0030	0.010	ug/l				70-130			
Endrin aldehyde	0.0133	0.0040	0.010	ug/l				70-130			
Endrin ketone	ND	0.0042	0.010	ug/l				70-130			
gamma-BHC (Lindane)	0.00537	0.0030	0.010	ug/l				70-130			J
gamma-Chlordane	ND	0.0074	0.010	ug/l				70-130			
Heptachlor	0.0139	0.0031	0.010	ug/l				70-130			
Heptachlor epoxide	ND	0.0019	0.010	ug/l				70-130			
Methoxychlor	0.0179	0.0030	0.010	ug/l				70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0854			ug/l	0.100		85	70-130			
LCS Dup (W3I2034-BSD1)						Prepared: 09/26/23 Analyzed: 10/20/23					
4,4'-DDD	0.0781	0.0030	0.010	ug/l	0.100		78	70-130	3	30	
4,4'-DDE	0.0671	0.0040	0.010	ug/l	0.100		67	70-130	0.9	30	
4,4'-DDT	0.0860	0.0030	0.010	ug/l	0.100		86	70-130	2	30	
Aldrin	0.0257	0.0040	0.010	ug/l	0.100		26	70-130	34	30	
alpha-BHC	0.0831	0.0015	0.010	ug/l	0.100		83	70-130	9	30	
alpha-Chlordane	0.0816	0.0031	0.010	ug/l	0.100		82	70-130	6	30	
beta-BHC	0.0810	0.0045	0.010	ug/l	0.100		81	70-130	8	30	
delta-BHC	0.0788	0.0030	0.010	ug/l	0.100		79	70-130	4	30	
Dieldrin	0.0787	0.0030	0.010	ug/l	0.100		79	70-130	6	30	
Endosulfan I	0.0760	0.0030	0.010	ug/l	0.100		76	70-130	8	30	
Endosulfan II	0.0800	0.0019	0.010	ug/l	0.100		80	70-130	4	30	
Endosulfan sulfate	0.0702	0.0030	0.010	ug/l	0.100		70	70-130	3	30	
Endrin	0.0705	0.0030	0.010	ug/l	0.100		70	70-130	24	30	
Endrin aldehyde	0.0837	0.0040	0.010	ug/l	0.100		84	70-130	40	30	
Endrin ketone	0.0956	0.0042	0.010	ug/l	0.100		96	70-130	4	30	
gamma-BHC (Lindane)	0.0846	0.0030	0.010	ug/l	0.100		85	70-130	9	30	
gamma-Chlordane	0.0826	0.0074	0.010	ug/l	0.100		83	70-130	7	30	
Heptachlor	0.0800	0.0031	0.010	ug/l	0.100		80	70-130	9	30	
Heptachlor epoxide	0.0834	0.0019	0.010	ug/l	0.100		83	70-130	8	30	
Methoxychlor	0.0985	0.0030	0.010	ug/l	0.100		98	70-130	2	30	
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0642			ug/l	0.100		64	70-130			
Batch: W3K0147 - EPA 508.1											
Blank (W3K0147-BLK1)						Prepared: 11/02/23 Analyzed: 11/15/23					
2,4'-DDD	ND	0.0030	0.010	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W3K0147 - EPA 508.1 (Continued)												
Blank (W3K0147-BLK1)					Prepared: 11/02/23 Analyzed: 11/15/23							
2,4'-DDE	ND	0.0030	0.010	ug/l								
2,4'-DDT	ND	0.0030	0.010	ug/l								
4,4'-DDD	ND	0.0030	0.010	ug/l								
4,4'-DDE	ND	0.0040	0.010	ug/l								
4,4'-DDT	ND	0.0030	0.010	ug/l								
Alachlor	ND	0.026	0.20	ug/l								
Aldrin	ND	0.0040	0.010	ug/l								
alpha-BHC	ND	0.0015	0.010	ug/l								
alpha-Chlordane	ND	0.0031	0.010	ug/l								
Aroclor 1016	ND	0.048	0.10	ug/l								
Aroclor 1221	ND	0.044	0.10	ug/l								
Aroclor 1232	ND	0.064	0.10	ug/l								
Aroclor 1242	ND	0.070	0.10	ug/l								
Aroclor 1248	ND	0.049	0.10	ug/l								
Aroclor 1254	ND	0.068	0.10	ug/l								
Aroclor 1260	ND	0.076	0.10	ug/l								
beta-BHC	ND	0.0045	0.010	ug/l								
Chlordane (tech)	ND	0.067	0.10	ug/l								
Chlorothalonil	ND	0.0040	0.050	ug/l								
cis-Nonachlor	ND	0.0030	0.010	ug/l								
delta-BHC	ND	0.0030	0.010	ug/l								
Dieldrin	ND	0.0030	0.010	ug/l								
Endosulfan I	ND	0.0030	0.010	ug/l								
Endosulfan II	ND	0.0019	0.010	ug/l								
Endosulfan sulfate	ND	0.0030	0.010	ug/l								
Endrin	ND	0.0030	0.010	ug/l								
Endrin aldehyde	ND	0.0040	0.010	ug/l								
Endrin ketone	ND	0.0042	0.010	ug/l								
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l								
gamma-Chlordane	ND	0.0074	0.010	ug/l								
Heptachlor	ND	0.0031	0.010	ug/l								
Heptachlor epoxide	ND	0.0019	0.010	ug/l								
Hexachlorobenzene	ND	0.0019	0.050	ug/l								
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l								
Kepone	ND	0.038	0.20	ug/l								
Methoxychlor	ND	0.0030	0.010	ug/l								
Mirex	ND	0.0030	0.010	ug/l								
PCBs, Total	ND	0.048	0.50	ug/l								
Propachlor	ND	0.045	0.20	ug/l								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:

11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3K0147 - EPA 508.1 (Continued)											
Blank (W3K0147-BLK1)						Prepared: 11/02/23 Analyzed: 11/15/23					
Toxaphene	ND	0.37	1.0	ug/l							
trans-Nonachlor	ND	0.0020	0.010	ug/l							
Trifluralin	ND	0.0043	0.010	ug/l							
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0933			ug/l	0.100		93	70-130			
LCS (W3K0147-BS1)						Prepared: 11/02/23 Analyzed: 11/15/23					
4,4'-DDD	0.117	0.0030	0.010	ug/l	0.100		117	70-130			
4,4'-DDE	0.0874	0.0040	0.010	ug/l	0.100		87	70-130			
4,4'-DDT	0.103	0.0030	0.010	ug/l	0.100		103	70-130			
Aldrin	0.0689	0.0040	0.010	ug/l	0.100		69	50-130			
alpha-BHC	0.108	0.0015	0.010	ug/l	0.100		108	70-130			
alpha-Chlordane	0.111	0.0031	0.010	ug/l	0.100		111	70-130			
beta-BHC	0.105	0.0045	0.010	ug/l	0.100		105	70-130			
delta-BHC	0.115	0.0030	0.010	ug/l	0.100		115	70-130			
Dieldrin	0.104	0.0030	0.010	ug/l	0.100		104	70-130			
Endosulfan I	0.106	0.0030	0.010	ug/l	0.100		106	70-130			
Endosulfan II	0.109	0.0019	0.010	ug/l	0.100		109	70-130			
Endosulfan sulfate	0.0804	0.0030	0.010	ug/l	0.100		80	70-130			
Endrin	0.104	0.0030	0.010	ug/l	0.100		104	70-130			
Endrin aldehyde	0.0949	0.0040	0.010	ug/l	0.100		95	70-130			
Endrin ketone	0.124	0.0042	0.010	ug/l	0.100		124	70-130			
gamma-BHC (Lindane)	0.110	0.0030	0.010	ug/l	0.100		110	70-130			
gamma-Chlordane	0.112	0.0074	0.010	ug/l	0.100		112	70-130			
Heptachlor	0.105	0.0031	0.010	ug/l	0.100		105	70-130			
Heptachlor epoxide	0.108	0.0019	0.010	ug/l	0.100		108	70-130			
Methoxychlor	0.102	0.0030	0.010	ug/l	0.100		102	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.104			ug/l	0.100		104	70-130			
LCS (W3K0147-BS2)						Prepared: 11/02/23 Analyzed: 11/15/23					
Toxaphene	0.833	0.37	1.0	ug/l	1.00		83	70-130			J
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0966			ug/l	0.100		97	70-130			
LCS Dup (W3K0147-BSD1)						Prepared: 11/02/23 Analyzed: 11/15/23					
4,4'-DDD	0.108	0.0030	0.010	ug/l	0.100		108	70-130	9	30	
4,4'-DDE	0.0810	0.0040	0.010	ug/l	0.100		81	70-130	8	30	
4,4'-DDT	0.0935	0.0030	0.010	ug/l	0.100		94	70-130	10	30	
Aldrin	0.0663	0.0040	0.010	ug/l	0.100		66	50-130	4	30	
alpha-BHC	0.0980	0.0015	0.010	ug/l	0.100		98	70-130	10	30	
alpha-Chlordane	0.102	0.0031	0.010	ug/l	0.100		102	70-130	8	30	
beta-BHC	0.0956	0.0045	0.010	ug/l	0.100		96	70-130	9	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:

11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3K0147 - EPA 508.1 (Continued)											
LCS Dup (W3K0147-BSD1)						Prepared: 11/02/23 Analyzed: 11/15/23					
delta-BHC	0.104	0.0030	0.010	ug/l	0.100		104	70-130	10	30	
Dieldrin	0.0941	0.0030	0.010	ug/l	0.100		94	70-130	10	30	
Endosulfan I	0.0771	0.0030	0.010	ug/l	0.100		77	70-130	31	30	Q-12
Endosulfan II	0.0839	0.0019	0.010	ug/l	0.100		84	70-130	26	30	
Endosulfan sulfate	0.0742	0.0030	0.010	ug/l	0.100		74	70-130	8	30	
Endrin	0.0960	0.0030	0.010	ug/l	0.100		96	70-130	8	30	
Endrin aldehyde	0.0869	0.0040	0.010	ug/l	0.100		87	70-130	9	30	
Endrin ketone	0.113	0.0042	0.010	ug/l	0.100		113	70-130	10	30	
gamma-BHC (Lindane)	0.0998	0.0030	0.010	ug/l	0.100		100	70-130	10	30	
gamma-Chlordane	0.102	0.0074	0.010	ug/l	0.100		102	70-130	9	30	
Heptachlor	0.0977	0.0031	0.010	ug/l	0.100		98	70-130	7	30	
Heptachlor epoxide	0.0999	0.0019	0.010	ug/l	0.100		100	70-130	8	30	
Methoxychlor	0.0956	0.0030	0.010	ug/l	0.100		96	70-130	7	30	
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.104			ug/l	0.100		104	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311869 - SM 4500H+-B											
LCS (W311869-BS1) Prepared & Analyzed: 09/22/23											
pH	6.93	0.10	0.10	pH Units	6.86		101	98.8-101			
Duplicate (W311869-DUP1) Source: 3111006-01 Prepared & Analyzed: 09/22/23											
pH	7.88	0.10	0.10	pH Units		7.87			0.1	3.1	
Batch: W311878 - SM 2510B											
Blank (W311878-BLK1) Prepared: 09/22/23 Analyzed: 09/25/23											
Specific Conductance (EC)	ND	1.1	2.0	umhos/cm							
LCS (W311878-BS1) Prepared: 09/22/23 Analyzed: 09/25/23											
Specific Conductance (EC)	450	1.1	2.0	umhos/cm	445		101	95-105			
Duplicate (W311878-DUP1) Source: 3111006-02 Prepared: 09/22/23 Analyzed: 09/25/23											
Specific Conductance (EC)	2660	4.3	8.0	umhos/cm		2620			1	5	
Batch: W312177 - SM 2540D											
Blank (W312177-BLK1) Prepared & Analyzed: 09/27/23											
Total Suspended Solids	0.200		5	mg/l							J
LCS (W312177-BS1) Prepared & Analyzed: 09/27/23											
Total Suspended Solids	59.0		5	mg/l	61.1		97	90-110			
Duplicate (W312177-DUP1) Source: 3121071-02 Prepared & Analyzed: 09/27/23											
Total Suspended Solids	6.80		5	mg/l					200	10	
Duplicate (W312177-DUP2) Source: 3122063-01 Prepared & Analyzed: 09/27/23											
Total Suspended Solids	5.60		5	mg/l		5.40			4	10	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:

11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311926 - EPA 200.8											
Blank (W311926-BLK1)					Prepared: 09/25/23 Analyzed: 09/26/23						
Cadmium, Total	ND	0.042	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Silver, Total	ND	0.055	0.20	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W311926-BS1)					Prepared: 09/25/23 Analyzed: 09/26/23						
Cadmium, Total	48.4	0.042	0.20	ug/l	50.0		97	85-115			
Copper, Total	52.8	0.23	0.50	ug/l	50.0		105	85-115			
Lead, Total	49.1	0.083	0.20	ug/l	50.0		98	85-115			
Silver, Total	48.3	0.055	0.20	ug/l	50.0		96	85-115			
Zinc, Total	49.4	1.7	10	ug/l	50.0		99	85-115			
Matrix Spike (W311926-MS1)					Source: 3H16002-01		Prepared: 09/25/23 Analyzed: 09/26/23				
Cadmium, Total	49.3	0.042	0.20	ug/l	50.0	ND	99	70-130			
Copper, Total	51.5	0.23	0.50	ug/l	50.0	ND	103	70-130			
Lead, Total	49.4	0.083	0.20	ug/l	50.0	ND	99	70-130			
Silver, Total	47.7	0.055	0.20	ug/l	50.0	ND	95	70-130			
Zinc, Total	49.6	1.7	10	ug/l	50.0	ND	99	70-130			
Matrix Spike (W311926-MS2)					Source: 3113003-04		Prepared: 09/25/23 Analyzed: 09/26/23				
Cadmium, Total	48.1	0.042	0.20	ug/l	50.0	ND	96	70-130			
Copper, Total	52.0	0.23	0.50	ug/l	50.0	ND	104	70-130			
Lead, Total	48.0	0.083	0.20	ug/l	50.0	ND	96	70-130			
Silver, Total	47.4	0.055	0.20	ug/l	50.0	ND	95	70-130			
Zinc, Total	48.2	1.7	10	ug/l	50.0	ND	96	70-130			
Matrix Spike Dup (W311926-MSD1)					Source: 3H16002-01		Prepared: 09/25/23 Analyzed: 09/26/23				
Cadmium, Total	48.4	0.042	0.20	ug/l	50.0	ND	97	70-130	2	30	
Copper, Total	51.6	0.23	0.50	ug/l	50.0	ND	103	70-130	0.2	30	
Lead, Total	49.1	0.083	0.20	ug/l	50.0	ND	98	70-130	0.7	30	
Silver, Total	47.1	0.055	0.20	ug/l	50.0	ND	94	70-130	1	30	
Zinc, Total	48.9	1.7	10	ug/l	50.0	ND	98	70-130	1	30	
Matrix Spike Dup (W311926-MSD2)					Source: 3113003-04		Prepared: 09/25/23 Analyzed: 09/26/23				
Cadmium, Total	47.6	0.042	0.20	ug/l	50.0	ND	95	70-130	1	30	
Copper, Total	52.3	0.23	0.50	ug/l	50.0	ND	104	70-130	0.5	30	
Lead, Total	48.0	0.083	0.20	ug/l	50.0	ND	96	70-130	0.07	30	
Silver, Total	47.6	0.055	0.20	ug/l	50.0	ND	95	70-130	0.5	30	
Zinc, Total	48.2	1.7	10	ug/l	50.0	ND	96	70-130	0.04	30	



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:

11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC		RPD		Qualifier
								Limits	RPD	Limit		
Batch: W311813 - SM 9221B												
Blank (W311813-BLK1)												
Total Coliform	ND	1.8	1.8	MPN/100m L								

Prepared: 09/21/23 Analyzed: 09/23/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2											
Blank (W311948-BLK1)					Prepared & Analyzed: 09/25/23						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
Blank (W311948-BLK1)						Prepared & Analyzed: 09/25/23					
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	0.0520		0.50	ug/l							J
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	48.4			ug/l	50.0		97	70-130			
4-Bromofluorobenzene	47.9			ug/l	50.0		96	70-130			

LCS (W311948-BS1)						Prepared & Analyzed: 09/25/23					
1,1,1,2-Tetrachloroethane	4.81	0.24	0.50	ug/l	5.00		96	70-130			
1,1,1-Trichloroethane	4.54	0.26	0.50	ug/l	5.00		91	70-130			
1,1,2,2-Tetrachloroethane	4.71	0.20	0.50	ug/l	5.00		94	70-130			
1,1,2-Trichloroethane	4.60	0.19	0.50	ug/l	5.00		92	70-130			
1,1-Dichloroethane	4.53	0.27	0.50	ug/l	5.00		91	70-130			
1,1-Dichloroethene	4.57	0.16	0.50	ug/l	5.00		91	70-130			
1,1-Dichloropropene	4.49	0.14	0.50	ug/l	5.00		90	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS (W311948-BS1)					Prepared & Analyzed: 09/25/23						
1,2,3-Trichlorobenzene	4.93	0.40	0.50	ug/l	5.00		99	70-130			
1,2,4-Trichlorobenzene	4.70	0.17	0.50	ug/l	5.00		94	70-130			
1,2,4-Trimethylbenzene	5.10	0.20	0.50	ug/l	5.00		102	70-130			
1,2-Dichloroethane	4.43	0.24	0.50	ug/l	5.00		89	70-130			
1,2-Dichloropropane	4.46	0.13	0.50	ug/l	5.00		89	70-130			
1,3,5-Trimethylbenzene	5.39	0.17	0.50	ug/l	5.00		108	70-130			
1,3-Dichloropropane	4.49	0.27	0.50	ug/l	5.00		90	70-130			
2,2-Dichloropropane	4.46	0.17	0.50	ug/l	5.00		89	70-130			
2-Butanone	4.12	1.5	5.0	ug/l	5.00		82	70-130			J
2-Chlorotoluene	5.36	0.15	0.50	ug/l	5.00		107	70-130			
2-Hexanone	4.02	1.2	5.0	ug/l	5.00		80	70-130			J
4-Chlorotoluene	5.30	0.15	0.50	ug/l	5.00		106	70-130			
4-Methyl-2-pentanone	4.23	1.8	5.0	ug/l	5.00		85	70-130			J
Benzene	4.58	0.15	0.50	ug/l	5.00		92	70-130			
Bromobenzene	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromochloromethane	4.56	0.15	0.50	ug/l	5.00		91	70-130			
Bromodichloromethane	4.66	0.24	0.50	ug/l	5.00		93	70-130			
Bromoform	4.45	0.38	0.50	ug/l	5.00		89	70-130			
Bromomethane	4.61	0.27	0.50	ug/l	5.00		92	70-130			
Carbon tetrachloride	4.57	0.27	0.50	ug/l	5.00		91	70-130			
Chlorobenzene	4.69	0.15	0.50	ug/l	5.00		94	70-130			
Chloroethane	4.84	0.17	0.50	ug/l	5.00		97	70-130			
Chloroform	4.48	0.27	0.50	ug/l	5.00		90	70-130			
Chloromethane	4.74	0.23	0.50	ug/l	5.00		95	70-130			
cis-1,2-Dichloroethene	4.46	0.25	0.50	ug/l	5.00		89	70-130			
cis-1,3-Dichloropropene	4.37	0.30	0.50	ug/l	5.00		87	70-130			
Dibromochloromethane	4.49	0.20	0.50	ug/l	5.00		90	70-130			
Dibromomethane	4.47	0.20	0.50	ug/l	5.00		89	70-130			
Dichlorodifluoromethane (Freon 12)	4.06	0.45	0.50	ug/l	5.00		81	70-130			
Di-isopropyl ether	17.0	1.1	2.0	ug/l	20.0		85	70-130			
Ethyl tert-butyl ether	16.1	1.0	2.0	ug/l	20.0		80	70-130			
Ethylbenzene	4.62	0.21	0.50	ug/l	5.00		92	70-130			
Freon 113	4.49	1.5	5.0	ug/l	5.00		90	70-130			J
Hexachlorobutadiene	4.65	0.40	0.50	ug/l	5.00		93	70-130			
Isopropylbenzene	4.57	0.18	0.50	ug/l	5.00		91	70-130			
m,p-Xylene	4.75	0.33	0.50	ug/l	5.00		95	70-130			
m-Dichlorobenzene	5.08	0.14	0.50	ug/l	5.00		102	70-130			
Methyl tert-butyl ether (MTBE)	16.4	0.94	2.0	ug/l	20.0		82	70-130			
Methylene chloride	4.68	0.30	0.50	ug/l	5.00		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS (W311948-BS1)					Prepared & Analyzed: 09/25/23						
Naphthalene	4.06	0.35	0.50	ug/l	5.00		81	70-130			
n-Butylbenzene	4.78	0.29	0.50	ug/l	5.00		96	70-130			
n-Propylbenzene	5.37	0.18	0.50	ug/l	5.00		107	70-130			
o-Dichlorobenzene	4.81	0.19	0.50	ug/l	5.00		96	70-130			
o-Xylene	4.68	0.20	0.50	ug/l	5.00		94	70-130			
p-Dichlorobenzene	5.04	0.18	0.50	ug/l	5.00		101	70-130			
p-Isopropyltoluene	5.03	0.25	0.50	ug/l	5.00		101	70-130			
sec-Butylbenzene	4.53	0.24	0.50	ug/l	5.00		91	70-130			
Styrene	4.81	0.19	0.50	ug/l	5.00		96	70-130			
Tert-amyl methyl ether	16.3	0.59	2.0	ug/l	20.0		81	70-130			
tert-Butylbenzene	4.63	0.18	0.50	ug/l	5.00		93	70-130			
Tetrachloroethene	4.72	0.18	0.50	ug/l	5.00		94	70-130			
Toluene	4.94	0.29	0.50	ug/l	5.00		99	70-130			
trans-1,2-Dichloroethene	4.58	0.26	0.50	ug/l	5.00		92	70-130			
trans-1,3-Dichloropropene	4.17	0.32	0.50	ug/l	5.00		83	70-130			
Trichloroethene	4.75	0.18	0.50	ug/l	5.00		95	70-130			
Trichlorofluoromethane	4.68	0.18	0.50	ug/l	5.00		94	70-130			
Vinyl chloride	4.55	0.18	0.50	ug/l	5.00		91	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	51.4			ug/l	50.0		103	70-130			
4-Bromofluorobenzene	51.0			ug/l	50.0		102	70-130			
LCS Dup (W311948-BSD1)					Prepared & Analyzed: 09/25/23						
1,1,1,2-Tetrachloroethane	5.29	0.24	0.50	ug/l	5.00		106	70-130	10	30	
1,1,1-Trichloroethane	5.27	0.26	0.50	ug/l	5.00		105	70-130	15	30	
1,1,2,2-Tetrachloroethane	5.19	0.20	0.50	ug/l	5.00		104	70-130	10	30	
1,1,2-Trichloroethane	5.06	0.19	0.50	ug/l	5.00		101	70-130	9	30	
1,1-Dichloroethane	5.41	0.27	0.50	ug/l	5.00		108	70-130	18	30	
1,1-Dichloroethene	5.29	0.16	0.50	ug/l	5.00		106	70-130	15	30	
1,1-Dichloropropene	5.07	0.14	0.50	ug/l	5.00		101	70-130	12	30	
1,2,3-Trichlorobenzene	5.62	0.40	0.50	ug/l	5.00		112	70-130	13	30	
1,2,4-Trichlorobenzene	5.41	0.17	0.50	ug/l	5.00		108	70-130	14	30	
1,2,4-Trimethylbenzene	5.67	0.20	0.50	ug/l	5.00		113	70-130	11	30	
1,2-Dichloroethane	5.05	0.24	0.50	ug/l	5.00		101	70-130	13	30	
1,2-Dichloropropane	5.01	0.13	0.50	ug/l	5.00		100	70-130	12	30	
1,3,5-Trimethylbenzene	6.08	0.17	0.50	ug/l	5.00		122	70-130	12	30	
1,3-Dichloropropane	5.16	0.27	0.50	ug/l	5.00		103	70-130	14	30	
2,2-Dichloropropane	5.26	0.17	0.50	ug/l	5.00		105	70-130	16	30	
2-Butanone	4.51	1.5	5.0	ug/l	5.00		90	70-130	9	30	J
2-Chlorotoluene	5.87	0.15	0.50	ug/l	5.00		117	70-130	9	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS Dup (W311948-BSD1)					Prepared & Analyzed: 09/25/23						
2-Hexanone	4.65	1.2	5.0	ug/l	5.00		93	70-130	15	30	J
4-Chlorotoluene	5.88	0.15	0.50	ug/l	5.00		118	70-130	10	30	
4-Methyl-2-pentanone	4.93	1.8	5.0	ug/l	5.00		99	70-130	15	30	J
Benzene	5.08	0.15	0.50	ug/l	5.00		102	70-130	10	30	
Bromobenzene	5.40	0.15	0.50	ug/l	5.00		108	70-130	10	30	
Bromochloromethane	5.21	0.15	0.50	ug/l	5.00		104	70-130	13	30	
Bromodichloromethane	4.88	0.24	0.50	ug/l	5.00		98	70-130	5	30	
Bromoform	4.97	0.38	0.50	ug/l	5.00		99	70-130	11	30	
Bromomethane	5.09	0.27	0.50	ug/l	5.00		102	70-130	10	30	
Carbon tetrachloride	5.12	0.27	0.50	ug/l	5.00		102	70-130	11	30	
Chlorobenzene	5.44	0.15	0.50	ug/l	5.00		109	70-130	15	30	
Chloroethane	5.28	0.17	0.50	ug/l	5.00		106	70-130	9	30	
Chloroform	5.21	0.27	0.50	ug/l	5.00		104	70-130	15	30	
Chloromethane	4.95	0.23	0.50	ug/l	5.00		99	70-130	4	30	
cis-1,2-Dichloroethene	4.99	0.25	0.50	ug/l	5.00		100	70-130	11	30	
cis-1,3-Dichloropropene	5.06	0.30	0.50	ug/l	5.00		101	70-130	14	30	
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00		99	70-130	10	30	
Dibromomethane	4.93	0.20	0.50	ug/l	5.00		99	70-130	10	30	
Dichlorodifluoromethane (Freon 12)	4.92	0.45	0.50	ug/l	5.00		98	70-130	19	30	
Di-isopropyl ether	20.7	1.1	2.0	ug/l	20.0		104	70-130	20	30	
Ethyl tert-butyl ether	21.5	1.0	2.0	ug/l	20.0		107	70-130	29	30	
Ethylbenzene	5.16	0.21	0.50	ug/l	5.00		103	70-130	11	30	
Freon 113	5.43	1.5	5.0	ug/l	5.00		109	70-130	19	30	
Hexachlorobutadiene	5.33	0.40	0.50	ug/l	5.00		107	70-130	14	30	
Isopropylbenzene	5.16	0.18	0.50	ug/l	5.00		103	70-130	12	30	
m,p-Xylene	5.20	0.33	0.50	ug/l	5.00		104	70-130	9	30	
m-Dichlorobenzene	5.64	0.14	0.50	ug/l	5.00		113	70-130	11	30	
Methyl tert-butyl ether (MTBE)	20.3	0.94	2.0	ug/l	20.0		101	70-130	21	30	
Methylene chloride	5.13	0.30	0.50	ug/l	5.00		103	70-130	9	30	
Naphthalene	4.75	0.35	0.50	ug/l	5.00		95	70-130	16	30	
n-Butylbenzene	5.49	0.29	0.50	ug/l	5.00		110	70-130	14	30	
n-Propylbenzene	6.05	0.18	0.50	ug/l	5.00		121	70-130	12	30	
o-Dichlorobenzene	5.31	0.19	0.50	ug/l	5.00		106	70-130	10	30	
o-Xylene	5.21	0.20	0.50	ug/l	5.00		104	70-130	11	30	
p-Dichlorobenzene	5.64	0.18	0.50	ug/l	5.00		113	70-130	11	30	
p-Isopropyltoluene	5.64	0.25	0.50	ug/l	5.00		113	70-130	11	30	
sec-Butylbenzene	5.11	0.24	0.50	ug/l	5.00		102	70-130	12	30	
Styrene	5.35	0.19	0.50	ug/l	5.00		107	70-130	10	30	
Tert-amyl methyl ether	20.9	0.59	2.0	ug/l	20.0		104	70-130	25	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
 11/27/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS Dup (W311948-BSD1)					Prepared & Analyzed: 09/25/23						
tert-Butylbenzene	5.19	0.18	0.50	ug/l	5.00		104	70-130	11	30	
Tetrachloroethene	5.37	0.18	0.50	ug/l	5.00		107	70-130	13	30	
Toluene	5.61	0.29	0.50	ug/l	5.00		112	70-130	13	30	
trans-1,2-Dichloroethene	5.45	0.26	0.50	ug/l	5.00		109	70-130	18	30	
trans-1,3-Dichloropropene	4.69	0.32	0.50	ug/l	5.00		94	70-130	12	30	
Trichloroethene	5.25	0.18	0.50	ug/l	5.00		105	70-130	10	30	
Trichlorofluoromethane	5.40	0.18	0.50	ug/l	5.00		108	70-130	14	30	
Vinyl chloride	5.28	0.18	0.50	ug/l	5.00		106	70-130	15	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.4			ug/l	50.0		107	70-130			
4-Bromofluorobenzene	52.9			ug/l	50.0		106	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica additional testing

Reported:
 11/27/2023 18:04

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
J	Estimated conc. detected <MRL and >MDL.
O-08	The original extraction and/or analysis of this sample yielded QC recoveries outside acceptance criteria. It was re-extracted/re-analyzed after the recommended maximum hold time.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Sample Receipt Checklist

Weck WKO: **3i21078**
WKO Logged by: Jerico Bolotano
Samples Checked by: Jerico Bolotano

Date/Time Received: 09/21/23 @ 14:46
of Samples: 01
Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		14.8°C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		Wet		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082366
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot#
Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amt. added

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerico Bolotano

Date: 09/21/23

Work Orders: 3122105

Report Date: 10/10/2023

Project: City of Santa Monica COSM 97-005 - Background Water Quality

Received Date: 09/22/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

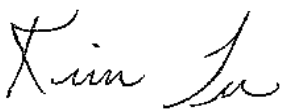
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 9/22/23 with the Chain-of-Custody document. The samples were received in good condition, at 20.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
 Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 10/10/2023 14:34

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-SW12-S4	Client	3I22105-01	Water	09/22/23 12:35	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
AWWA in Water Aggressive Index		✓	
SM 9215E in Water Heterotrophic Plate Count		✓	
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
Background Water Quality
Project Manager: Brown & Caldwell

Reported:
10/10/2023 14:34

Sample Results

Sample: PT-SW12-S4
3122105-01 (Water) Sampled: 09/22/23 12:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W311916	Preparation: _NONE (LC)		Prepared: 09/25/23 09:16			Analyst: CLL	
Chloride, Total	130	0.19	0.50	mg/l	1	09/26/23	
Fluoride, Total	0.24	0.0090	0.10	mg/l	1	09/26/23	
Anions by IC, EPA Method 300.1							
Method: EPA 300.1			Instr: LC08_Channel2				
Batch ID: W3J0150	Preparation: _NONE (LC)		Prepared: 10/03/23 10:05			Analyst: JAN	
Bromate	ND	1.4	5.0	ug/l	1	10/04/23	
Bromide	550	1.7	10	ug/l	1	10/04/23	
Chlorate	72	1.7	10	ug/l	1	10/04/23	
Chlorite	ND	2.2	10	ug/l	1	10/04/23	
<i>Surrogate(s)</i>							
Dichloroacetate	91%	Conc: 455	90-115			10/04/23	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W3J0301	Preparation: _NONE (METALS)		Prepared: 10/04/23 10:04			Analyst: aln	
Aggressive Index	12.1			AGI	1	10/04/23	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W311881	Preparation: _NONE (WETCHEM)		Prepared: 09/22/23 17:42			Analyst: bel	
Threshold Odor Number	1.0		1.0	T.O.N.	1	09/22/23 18:54	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W3J0213	Preparation: _NONE (WETCHEM)		Prepared: 10/03/23 13:59			Analyst: AEC	
Ammonia as N	0.047	0.017	0.10	mg/l	1	10/04/23	J
Method: EPA 353.2			Instr: AA01				
Batch ID: W311885	Preparation: _NONE (WETCHEM)		Prepared: 09/23/23 07:56			Analyst: ISM	
Nitrate as N	6.4	0.040	0.20	mg/l	1	09/23/23 09:18	
Nitrite as N	76	42	100	ug/l	1	09/23/23 09:18	J
Method: EPA 365.3			Instr: UVVIS04				
Batch ID: W3J0072	Preparation: _NONE (WETCHEM)		Prepared: 10/02/23 13:49			Analyst: JSG	
Phosphorus as PO4, Total	0.36	0.021	0.030	mg/l	1	10/05/23	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W311883	Preparation: _NONE (WETCHEM)		Prepared: 09/22/23 17:49			Analyst: kac	
Color	ND		3.0	Color Units	1	09/22/23 18:21	
Method: SM 2320B			Instr: AA02				
Batch ID: W311876	Preparation: _NONE (WETCHEM)		Prepared: 09/22/23 17:24			Analyst: mes	
Alkalinity as CaCO3	310	7.2	20	mg/l	1	09/25/23	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W3J0299	Preparation: _NONE (METALS)		Prepared: 10/04/23 10:02			Analyst: aln	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
 Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 10/10/2023 14:34

Sample Results

(Continued)

Sample: PT-SW12-S4
 3I22105-01 (Water) Sampled: 09/22/23 12:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W3J0299	Preparation: _NONE (METALS)			Prepared: 10/04/23 10:02		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	26.4	-100	-100	N/A	1	10/04/23	A-01
Method: SM 2330B				Instr: [CALC]			
Batch ID: W3J0304	Preparation: _NONE (METALS)			Prepared: 10/04/23 10:06		Analyst: aln	
Langelier Index @ 20 C	0.164	-20.0	-10.0	LSI	1	10/04/23	
Langelier Index @ 60 C	0.678	-20.0	-10.0	LSI	1	10/04/23	
Method: SM 2540C				Instr: OVEN17			
Batch ID: W3I1882	Preparation: _NONE (WETCHEM)			Prepared: 09/22/23 17:44		Analyst: bel	
Total Dissolved Solids	640	4.0	10	mg/l	1	09/25/23	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W3I1869	Preparation: _NONE (WETCHEM)			Prepared: 09/22/23 16:54		Analyst: mes	
pH	7.10	0.10	0.10	pH Units	1	09/22/23 18:33	*
Method: SM 5310B				Instr: TOC02			
Batch ID: W3J0500	Preparation: _NONE (TOC/TOX)			Prepared: 10/05/23 12:56		Analyst: rem	
Total Organic Carbon (TOC)	0.63	0.19	0.30	mg/l	1	10/09/23	
Metals by EPA 200 Series Methods							
Method: Calculation				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 09/29/23 09:51		Analyst: kvm	
Hardness as CaCO3, Total	514	0.344	3.31	mg/l	1	10/02/23	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W3I2452	Preparation: EPA 200.2			Prepared: 09/29/23 09:51		Analyst: kvm	
Boron, Total	140	3.0	10	ug/l	1	10/02/23	
Calcium, Total	117	0.0736	0.500	mg/l	1	10/02/23	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/02/23	
Iron, Total	0.21	0.025	0.030	mg/l	1	10/02/23	
Magnesium, Total	54.2	0.0390	0.500	mg/l	1	10/02/23	
Potassium, Total	3.1	0.20	0.50	mg/l	1	10/02/23	
Silica as SiO2, Dissolved	39	0.0086	0.10	mg/l	1	10/02/23	
Silica as SiO2, Total	40	0.0086	0.10	mg/l	1	10/02/23	
Sodium, Total	100	0.52	1.0	mg/l	1	10/02/23	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W3I2454	Preparation: EPA 200.2			Prepared: 09/29/23 12:00		Analyst: tyc	
Aluminum, Total	130	4.4	20	ug/l	1	10/02/23	
Arsenic, Total	1.0	0.074	0.40	ug/l	1	10/02/23	
Barium, Total	64	0.14	1.0	ug/l	1	10/02/23	
Copper, Total	0.62	0.23	0.50	ug/l	1	10/02/23	
Lead, Total	ND	0.083	0.20	ug/l	1	10/02/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
Background Water Quality

Reported:
10/10/2023 14:34

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW12-S4
3I22105-01 (Water) Sampled: 09/22/23 12:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W3I2454		Preparation: EPA 200.2		Prepared: 09/29/23 12:00		Analyst: tyc	
Manganese, Dissolved	10	0.11	1.0	ug/l	1	10/02/23	
Manganese, Total	27	0.23	1.0	ug/l	1	10/02/23	
Selenium, Total	3.3	0.067	0.40	ug/l	1	10/02/23	
Strontium, Total	620	0.036	0.20	ug/l	1	10/02/23	

Microbiological Parameters by Standard Methods

Method: SM 9215E				Instr: INC06			
Batch ID: W3I1891		Preparation: _NONE (MICROBIOLOGY)		Prepared: 09/22/23 15:06		Analyst: atd	
Heterotrophic Plate Count	>=740	2.0	2.0	MPN/mL	1	09/24/23	
Method: SM 9221B				Instr: INC12			
Batch ID: W3I1890		Preparation: _NONE (MICROBIOLOGY)		Prepared: 09/22/23 15:16		Analyst: atd	
Total Coliform	ND	1.8	1.8	MPN/100mL	1	09/24/23	

Sample Results

(Continued)

Sample: PT-SW12-S4
3I22105-01RE1 (Water) Sampled: 09/22/23 12:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W3I1916		Preparation: _NONE (LC)		Prepared: 09/25/23 09:16		Analyst: CLL	
Sulfate as SO4	230	0.72	1.5	mg/l	3	09/26/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
 Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 10/10/2023 14:34

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311916 - EPA 300.0											
Blank (W311916-BLK1)						Prepared & Analyzed: 09/25/23					
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W311916-BS1)						Prepared & Analyzed: 09/25/23					
Chloride, Total	20.7	0.19	0.50	mg/l	20.0		104	90-110			
Fluoride, Total	1.97	0.0090	0.10	mg/l	2.00		99	90-110			
Sulfate as SO4	19.8	0.24	0.50	mg/l	20.0		99	90-110			
Matrix Spike (W311916-MS1)						Source: 3H11010-01 Prepared: 09/25/23 Analyzed: 09/26/23					
Chloride, Total	230	1.9	5.0	mg/l	200	29.9	100	76-118			
Fluoride, Total	19.4	0.090	1.0	mg/l	20.0	0.303	95	86-107			
Sulfate as SO4	190	2.4	5.0	mg/l	200	ND	95	78-111			
Matrix Spike (W311916-MS2)						Source: 3H11010-03 Prepared: 09/25/23 Analyzed: 09/26/23					
Chloride, Total	299	1.9	5.0	mg/l	200	93.3	103	76-118			
Fluoride, Total	19.7	0.090	1.0	mg/l	20.0	0.321	97	86-107			
Sulfate as SO4	370	2.4	5.0	mg/l	200	159	105	78-111			
Matrix Spike Dup (W311916-MSD1)						Source: 3H11010-01 Prepared: 09/25/23 Analyzed: 09/26/23					
Chloride, Total	230	1.9	5.0	mg/l	200	29.9	100	76-118	0.2	20	
Fluoride, Total	19.4	0.090	1.0	mg/l	20.0	0.303	95	86-107	0	20	
Sulfate as SO4	190	2.4	5.0	mg/l	200	ND	95	78-111	0.2	20	
Matrix Spike Dup (W311916-MSD2)						Source: 3H11010-03 Prepared: 09/25/23 Analyzed: 09/26/23					
Chloride, Total	299	1.9	5.0	mg/l	200	93.3	103	76-118	0.02	20	
Fluoride, Total	19.7	0.090	1.0	mg/l	20.0	0.321	97	86-107	0.2	20	
Sulfate as SO4	368	2.4	5.0	mg/l	200	159	105	78-111	0.3	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
Background Water Quality

Reported:
10/10/2023 14:34

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0150 - EPA 300.1											
Blank (W3J0150-BLK1)					Prepared & Analyzed: 10/03/23						
Bromate	ND	1.4	5.0	ug/l							
Bromide	ND	1.7	10	ug/l							
Chlorate	ND	1.7	10	ug/l							
Chlorite	ND	2.2	10	ug/l							
<i>Surrogate(s)</i>											
Dichloroacetate	471			ug/l	500		94	90-115			
Blank (W3J0150-BLK2)					Prepared: 10/03/23 Analyzed: 10/04/23						
Bromate	ND	1.4	5.0	ug/l							QC-2
Bromide	ND	1.7	10	ug/l							QC-2
Chlorate	ND	1.7	10	ug/l							QC-2
Chlorite	ND	2.2	10	ug/l							QC-2
<i>Surrogate(s)</i>											
Dichloroacetate	498			ug/l	500		100	90-115			
LCS (W3J0150-BS1)					Prepared & Analyzed: 10/03/23						
Bromate	95.8	1.4	5.0	ug/l	100		96	85-115			
Bromide	99.0	1.7	10	ug/l	100		99	85-115			
Chlorate	91.6	1.7	10	ug/l	100		92	85-115			
Chlorite	90.1	2.2	10	ug/l	100		90	85-115			
<i>Surrogate(s)</i>											
Dichloroacetate	505			ug/l	500		101	90-115			
LCS (W3J0150-BS2)					Prepared: 10/03/23 Analyzed: 10/04/23						
Bromate	97.3	1.4	5.0	ug/l	100		97	85-115			QC-2
Bromide	110	1.7	10	ug/l	100		110	85-115			QC-2
Chlorate	100	1.7	10	ug/l	100		100	85-115			QC-2
Chlorite	86.5	2.2	10	ug/l	100		87	85-115			QC-2
<i>Surrogate(s)</i>											
Dichloroacetate	502			ug/l	500		100	90-115			
Matrix Spike (W3J0150-MS1)					Source: 3120064-04		Prepared & Analyzed: 10/03/23				
Bromate	87.6	1.4	5.0	ug/l	100	ND	88	64-133			
Bromide	99.4	1.7	10	ug/l	100	3.88	96	73-125			
Chlorate	95.7	1.7	10	ug/l	100	20.0	76	76-120			
Chlorite	83.3	2.2	10	ug/l	100	ND	83	78-129			
<i>Surrogate(s)</i>											
Dichloroacetate	485			ug/l	500		97	90-115			
Matrix Spike (W3J0150-MS2)					Source: 3120064-05		Prepared & Analyzed: 10/03/23				
Bromate	92.1	1.4	5.0	ug/l	100	ND	92	64-133			
Bromide	98.2	1.7	10	ug/l	100	2.59	96	73-125			
Chlorate	633	1.7	10	ug/l	100	584	49	76-120			MS-02
Chlorite	84.8	2.2	10	ug/l	100	ND	85	78-129			
<i>Surrogate(s)</i>											

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
 Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 10/10/2023 14:34

Quality Control Results (Continued)

Anions by IC, EPA Method 300.1 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0150 - EPA 300.1 (Continued)											
Matrix Spike (W3J0150-MS2)			Source: 3I20064-05			Prepared & Analyzed: 10/03/23					
<i>Surrogate(s)</i>											
Dichloroacetate	496			ug/l	500		99	90-115			
Matrix Spike Dup (W3J0150-MSD1)			Source: 3I20064-04			Prepared & Analyzed: 10/03/23					
Bromate	84.1	1.4	5.0	ug/l	100	ND	84	64-133	4	20	
Bromide	92.0	1.7	10	ug/l	100	3.88	88	73-125	8	20	
Chlorate	102	1.7	10	ug/l	100	20.0	82	76-120	6	20	
Chlorite	78.8	2.2	10	ug/l	100	ND	79	78-129	6	20	
<i>Surrogate(s)</i>											
Dichloroacetate	464			ug/l	500		93	90-115			
Matrix Spike Dup (W3J0150-MSD2)			Source: 3I20064-05			Prepared & Analyzed: 10/03/23					
Bromate	81.3	1.4	5.0	ug/l	100	ND	81	64-133	12	20	
Bromide	88.4	1.7	10	ug/l	100	2.59	86	73-125	10	20	
Chlorate	605	1.7	10	ug/l	100	584	21	76-120	4	20	MS-02
Chlorite	81.5	2.2	10	ug/l	100	ND	81	78-129	4	20	
<i>Surrogate(s)</i>											
Dichloroacetate	461			ug/l	500		92	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
Background Water Quality
Project Manager: Brown & Caldwell

Reported:
10/10/2023 14:34

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311869 - SM 4500H+-B											
LCS (W311869-BS1)											
pH	6.93	0.10	0.10	pH Units	6.86		101	98.8-101			
Duplicate (W311869-DUP1) Source: 3111006-01											
pH	7.88	0.10	0.10	pH Units		7.87			0.1	3.1	
Batch: W311876 - SM 2320B											
Blank (W311876-BLK1)											
Alkalinity as CaCO3	ND	7.2	20	mg/l							
LCS (W311876-BS1)											
Alkalinity as CaCO3	195	7.2	20	mg/l	186		105	94-108			
Duplicate (W311876-DUP1) Source: 3111006-02											
Alkalinity as CaCO3	890	7.2	20	mg/l		905			2	15	
Batch: W311881 - EPA 140.1											
Blank (W311881-BLK1)											
Threshold Odor Number	1.0		1.0	T.O.N.							J
Duplicate (W311881-DUP1) Source: 3111006-04											
Threshold Odor Number	1.0		1.0	T.O.N.		1.0			0	20	J
Batch: W311882 - SM 2540C											
Blank (W311882-BLK1)											
Total Dissolved Solids	ND	4.0	10	mg/l							
LCS (W311882-BS1)											
Total Dissolved Solids	801	4.0	10	mg/l	824		97	97-103			
Duplicate (W311882-DUP1) Source: 3121100-01											
Total Dissolved Solids	35000	4.0	10	mg/l		34400			2	10	
Duplicate (W311882-DUP2) Source: 3111006-02											
Total Dissolved Solids	1510	4.0	10	mg/l		1520			0.7	10	
Batch: W311883 - SM 2120B											
LCS (W311883-BS1)											
Color	10.0		3.0	Color Units	10.0		100	95-105			
Duplicate (W311883-DUP1) Source: 3111006-02											
Color	300		30	Color Units		300			0	10	
Batch: W311885 - EPA 353.2											
Blank (W311885-BLK1)											
Nitrate as N	ND	0.040	0.20	mg/l							
Nitrite as N	ND	42	100	ug/l							
LCS (W311885-BS1)											
Nitrate as N	0.915	0.040	0.20	mg/l	1.00		92	90-110			
Nitrite as N	1030	42	100	ug/l	1000		103	90-110			
Matrix Spike (W311885-MS1) Source: 3121071-01											
Prepared & Analyzed: 09/23/23											

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
Background Water Quality
Project Manager: Brown & Caldwell

Reported:
10/10/2023 14:34

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311885 - EPA 353.2 (Continued)											
Matrix Spike (W311885-MS1)			Source: 3I21071-01			Prepared & Analyzed: 09/23/23					
Nitrate as N	9.97	0.040	0.20	mg/l	2.00	8.12	93	90-110			
Nitrite as N	1030	42	100	ug/l	1000	ND	103	90-110			
Matrix Spike (W311885-MS2)			Source: 3I21071-02			Prepared & Analyzed: 09/23/23					
Nitrate as N	4.34	0.040	0.20	mg/l	2.00	2.28	103	90-110			
Nitrite as N	1220	42	100	ug/l	1000	251	97	90-110			
Matrix Spike Dup (W311885-MSD1)			Source: 3I21071-01			Prepared & Analyzed: 09/23/23					
Nitrate as N	9.96	0.040	0.20	mg/l	2.00	8.12	92	90-110	0.1	20	
Nitrite as N	1040	42	100	ug/l	1000	ND	104	90-110	1	20	
Matrix Spike Dup (W311885-MSD2)			Source: 3I21071-02			Prepared & Analyzed: 09/23/23					
Nitrate as N	4.32	0.040	0.20	mg/l	2.00	2.28	102	90-110	0.5	20	
Nitrite as N	1240	42	100	ug/l	1000	251	99	90-110	2	20	
Batch: W3J0072 - EPA 365.3											
Blank (W3J0072-BLK1)						Prepared: 10/02/23 Analyzed: 10/05/23					
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W3J0072-BS1)						Prepared: 10/02/23 Analyzed: 10/05/23					
Phosphorus as PO4, Total	0.618	0.021	0.030	mg/l	0.612		101	90-110			
Matrix Spike (W3J0072-MS1)			Source: 3I20009-01			Prepared: 10/02/23 Analyzed: 10/05/23					
Phosphorus as PO4, Total	0.947	0.021	0.030	mg/l	0.612	0.303	105	90-110			
Matrix Spike Dup (W3J0072-MSD1)			Source: 3I20009-01			Prepared: 10/02/23 Analyzed: 10/05/23					
Phosphorus as PO4, Total	0.920	0.021	0.030	mg/l	0.612	0.303	101	90-110	3	20	
Batch: W3J0213 - EPA 350.1											
Blank (W3J0213-BLK1)						Prepared: 10/03/23 Analyzed: 10/04/23					
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W3J0213-BLK2)						Prepared: 10/03/23 Analyzed: 10/04/23					
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W3J0213-BS1)						Prepared: 10/03/23 Analyzed: 10/04/23					
Ammonia as N	0.259	0.017	0.10	mg/l	0.250		104	90-110			
LCS (W3J0213-BS2)						Prepared: 10/03/23 Analyzed: 10/04/23					
Ammonia as N	0.232	0.017	0.10	mg/l	0.250		93	90-110			
Duplicate (W3J0213-DUP1)			Source: 3I25066-02			Prepared: 10/03/23 Analyzed: 10/04/23					
Ammonia as N	ND	0.017	0.10	mg/l		ND				15	
Matrix Spike (W3J0213-MS1)			Source: 3I25066-01			Prepared: 10/03/23 Analyzed: 10/04/23					
Ammonia as N	0.260	0.017	0.10	mg/l	0.250	ND	104	90-110			
Matrix Spike (W3J0213-MS2)			Source: 3I28078-01			Prepared: 10/03/23 Analyzed: 10/04/23					
Ammonia as N	0.244	0.017	0.10	mg/l	0.250	ND	98	90-110			
Matrix Spike Dup (W3J0213-MSD1)			Source: 3I25066-01			Prepared: 10/03/23 Analyzed: 10/04/23					
Ammonia as N	0.259	0.017	0.10	mg/l	0.250	ND	104	90-110	0.6	15	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
 Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 10/10/2023 14:34

Quality Control Results (Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0213 - EPA 350.1 (Continued)											
Matrix Spike Dup (W3J0213-MSD2) Source: 3I28078-01 Prepared: 10/03/23 Analyzed: 10/04/23											
Ammonia as N	0.241	0.017	0.10	mg/l	0.250	ND	97	90-110	1	15	
Batch: W3J0500 - SM 5310B											
Blank (W3J0500-BLK1) Prepared: 10/05/23 Analyzed: 10/08/23											
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							
LCS (W3J0500-BS1) Prepared: 10/05/23 Analyzed: 10/08/23											
Total Organic Carbon (TOC)	0.924	0.19	0.30	mg/l	1.00		92	85-115			
Matrix Spike (W3J0500-MS1) Source: 3H11010-01 Prepared: 10/05/23 Analyzed: 10/08/23											
Total Organic Carbon (TOC)	6.65	0.19	0.30	mg/l	5.00	1.51	103	76-115			
Matrix Spike Dup (W3J0500-MSD1) Source: 3H11010-01 Prepared: 10/05/23 Analyzed: 10/08/23											
Total Organic Carbon (TOC)	6.55	0.19	0.30	mg/l	5.00	1.51	101	76-115	2	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
 Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 10/10/2023 14:34

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W312452 - EPA 200.7										
Blank (W312452-BLK1)					Prepared: 09/29/23 Analyzed: 10/02/23					
Boron, Total	3.63	3.0	10	ug/l						J
Calcium, Total	ND	0.0736	0.500	mg/l						
Iron, Dissolved	ND	5.0	30	ug/l						
Iron, Total	ND	0.025	0.030	mg/l						
Magnesium, Total	ND	0.0390	0.500	mg/l						
Potassium, Total	ND	0.20	0.50	mg/l						
Silica as SiO2, Dissolved	0.0168	0.0086	0.10	mg/l						J
Silica as SiO2, Total	0.0168	0.0086	0.10	mg/l						J
Sodium, Total	ND	0.52	1.0	mg/l						
LCS (W312452-BS1)					Prepared: 09/29/23 Analyzed: 10/02/23					
Boron, Total	224	3.0	10	ug/l	200	112	85-115			
Calcium, Total	49.6	0.0736	0.500	mg/l	50.3	99	85-115			
Iron, Dissolved	208	5.0	30	ug/l	200	104	85-115			
Iron, Total	0.208	0.025	0.030	mg/l	0.200	104	85-115			
Magnesium, Total	49.5	0.0390	0.500	mg/l	50.3	98	85-115			
Potassium, Total	55.1	0.20	0.50	mg/l	52.2	106	85-115			
Silica as SiO2, Dissolved	43.9	0.0086	0.10	mg/l	43.3	101	85-115			
Silica as SiO2, Total	43.9	0.0086	0.10	mg/l	43.3	101	85-115			
Sodium, Total	48.3	0.52	1.0	mg/l	50.3	96	85-115			
Matrix Spike (W312452-MS1)					Source: 3127038-01 Prepared: 09/29/23 Analyzed: 10/02/23					
Boron, Total	252	3.0	10	ug/l	200	31.4	110	70-130		
Calcium, Total	77.8	0.0736	0.500	mg/l	50.3	29.7	96	70-130		
Iron, Dissolved	224	5.0	30	ug/l	200	18.4	103	70-130		
Iron, Total	0.224	0.025	0.030	mg/l	0.200	ND	112	70-130		
Magnesium, Total	62.7	0.0390	0.500	mg/l	50.3	14.2	96	70-130		
Potassium, Total	58.1	0.20	0.50	mg/l	52.2	2.98	106	70-130		
Silica as SiO2, Dissolved	100	0.0086	0.10	mg/l	43.3	58.0	98	70-130		
Silica as SiO2, Total	100	0.0086	0.10	mg/l	43.3	58.0	98	70-130		
Sodium, Total	60.2	0.52	1.0	mg/l	50.3	11.9	96	70-130		
Matrix Spike Dup (W312452-MSD1)					Source: 3127038-01 Prepared: 09/29/23 Analyzed: 10/02/23					
Boron, Total	253	3.0	10	ug/l	200	31.4	111	70-130	0.5	30
Calcium, Total	78.2	0.0736	0.500	mg/l	50.3	29.7	97	70-130	0.6	30
Iron, Dissolved	226	5.0	30	ug/l	200	18.4	104	70-130	0.9	30
Iron, Total	0.226	0.025	0.030	mg/l	0.200	ND	113	70-130	0.9	30
Magnesium, Total	63.0	0.0390	0.500	mg/l	50.3	14.2	97	70-130	0.5	30
Potassium, Total	58.4	0.20	0.50	mg/l	52.2	2.98	106	70-130	0.4	30
Silica as SiO2, Dissolved	101	0.0086	0.10	mg/l	43.3	58.0	100	70-130	1	30
Silica as SiO2, Total	101	0.0086	0.10	mg/l	43.3	58.0	100	70-130	1	30
Sodium, Total	60.4	0.52	1.0	mg/l	50.3	11.9	97	70-130	0.4	30

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
Background Water Quality
Project Manager: Brown & Caldwell

Reported:
10/10/2023 14:34

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W312452 - EPA 200.7 (Continued)											
Matrix Spike Dup (W312452-MSD1)			Source: 3127038-01			Prepared: 09/29/23 Analyzed: 10/02/23					
Batch: W312454 - EPA 200.8											
Blank (W312454-BLK1)											
Prepared: 09/29/23 Analyzed: 10/02/23											
Aluminum, Total	ND	4.4	20	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W312454-BS1)											
Prepared: 09/29/23 Analyzed: 10/02/23											
Aluminum, Total	53.4	4.4	20	ug/l	50.0		107	85-115			
Arsenic, Total	51.4	0.074	0.40	ug/l	50.0	0.289	103	85-115			
Barium, Total	48.7	0.14	1.0	ug/l	50.0	53.3	97	85-115			
Copper, Total	53.2	0.23	0.50	ug/l	50.0	ND	106	85-115			
Lead, Total	49.6	0.083	0.20	ug/l	50.0	ND	99	85-115			
Manganese, Dissolved	52.8	0.11	1.0	ug/l	50.0	47.3	106	85-115			
Manganese, Total	52.8	0.23	1.0	ug/l	50.0	47.3	106	85-115			
Selenium, Total	49.6	0.067	0.40	ug/l	50.0	ND	99	85-115			
Strontium, Total	49.3	0.036	0.20	ug/l	50.0	402	98	85-115			
Matrix Spike (W312454-MS1)											
Source: 3122003-02			Prepared: 09/29/23 Analyzed: 10/02/23								
Aluminum, Total	52.6	4.4	20	ug/l	50.0	ND	105	70-130			
Arsenic, Total	50.7	0.074	0.40	ug/l	50.0	0.289	101	70-130			
Barium, Total	103	0.14	1.0	ug/l	50.0	53.3	99	70-130			
Copper, Total	51.0	0.23	0.50	ug/l	50.0	ND	102	70-130			
Lead, Total	48.4	0.083	0.20	ug/l	50.0	ND	97	70-130			
Manganese, Dissolved	97.4	0.11	1.0	ug/l	50.0	47.3	100	70-130			
Manganese, Total	97.4	0.23	1.0	ug/l	50.0	47.3	100	70-130			
Selenium, Total	48.3	0.067	0.40	ug/l	50.0	ND	96	70-130			
Strontium, Total	447	0.036	0.20	ug/l	50.0	402	90	70-130			
Matrix Spike Dup (W312454-MSD1)											
Source: 3122003-02			Prepared: 09/29/23 Analyzed: 10/02/23								
Aluminum, Total	52.6	4.4	20	ug/l	50.0	ND	105	70-130	0.02	30	
Arsenic, Total	51.5	0.074	0.40	ug/l	50.0	0.289	102	70-130	2	30	
Barium, Total	103	0.14	1.0	ug/l	50.0	53.3	99	70-130	0.03	30	
Copper, Total	50.6	0.23	0.50	ug/l	50.0	ND	101	70-130	0.8	30	
Lead, Total	48.4	0.083	0.20	ug/l	50.0	ND	97	70-130	0.06	30	
Manganese, Dissolved	97.4	0.11	1.0	ug/l	50.0	47.3	100	70-130	0.04	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
 Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 10/10/2023 14:34

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W312454 - EPA 200.8 (Continued)												
Matrix Spike Dup (W312454-MSD1)			Source: 3122003-02			Prepared: 09/29/23		Analyzed: 10/02/23				
Manganese, Total	97.4	0.23	1.0	ug/l	50.0	47.3	100	70-130	0.04	30		
Selenium, Total	48.7	0.067	0.40	ug/l	50.0	ND	97	70-130	0.9	30		
Strontium, Total	453	0.036	0.20	ug/l	50.0	402	103	70-130	1	30		

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W311890 - SM 9221B												
Blank (W311890-BLK1)						Prepared: 09/22/23		Analyzed: 09/24/23				
Total Coliform	ND	1.8	1.8	MPN/100m L								

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica COSM 97-005 -
 Background Water Quality

Reported:
 10/10/2023 14:34

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
_>=740	>=740
A-01	using default temperature at 20C
J	Estimated conc. detected <MRL and >MDL.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
 Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3I22105**

Page 1 Of 1

CLIENT NAME:		PROJECT:		ANALYSES REQUESTED										SPECIAL HANDLING								
Brown and Caldwell - Los Angeles		COSM 97-005 - Background Water Quality		140.1 Odor, 2120B Color	200.7/200.8 Total&Dissolved Metals*	alkalinity, TDS	300.0 Cl, F, SO4	300.1**	350.1 Ammonia, 353.2 NO2, NO3	365.3 PO4	Aggressive Index, CCP, 1.SI, Hardness	9215E TPC-Simplate	9221 MFT	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package								
ADDRESS:		PHONE:		ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.													
1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		ckindle@BrwnCald.com																				
PROJECT MANAGER		SAMPLER																				
Chris Kindle		invoice to Rose Ford, Rford@BrwnCald.com																				
	9/22	12:35	G	PT-SW12-S4	10	X	X	X	X	X	X	X	X	X	X	X	*Bacteriological Testing has a strict 8 hour holding time. Lab must receive the samples within 6 hours of collection to have sufficient time to prepare and incubate the samples before expiration. *Total Metals: B, Ca, Fe, K, Mg, Na, Silica, Al, As, Ba, Cu, Mn, Pb, Se, Sr *Dissolved Metals: Fe, Silica, Mn **300.1: Bromate, Bromide, Chlorate, Chlorite					
				9/25/2023: Per Steven Shiokari, add TOC analysis to sample PT-SW12-S4. -kgt																		

RELINQUISHED BY	DATE / TIME	RECEIVED BY	SAMPLE CONDITION:	SAMPLE TYPE CODE:
<i>Steven Shiokari</i>	9/22 1:05	<i>[Signature]</i> 09/22/23 1:05	Actual Temperature: 20 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
<i>[Signature]</i>	09/22 2:25	<i>[Signature]</i> 9/22/23 14:25		Y/N Y/N Y/N Y/N

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.



Sample Receipt Checklist

Weck WKO: **3122105**
 WKO Logged by: **Jaime Gomez**
 Samples Checked by: **Jaime Gomez**

Date/Time Received: **09/22/23 13:50**
 # of Samples: **01**
 Delivered by: **Client**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		20°C
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, if Yes (see comment)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT				pH paper Lot# 3082366
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9				CI Test Strip Lot#
Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: 09/22/23

Work Orders: 3122106

Project: COSM 97-005 - Greensand Performance

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/20/2023

Received Date: 9/22/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 9/22/23 with the Chain-of-Custody document. The samples were received in good condition, at 20.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
 11/20/2023 16:51

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
Storm Drain	Client	3I22106-01	Water	09/22/23 11:35	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:

11/20/2023 16:51

Project Manager: Brown & Caldwell

Sample Results

Sample: Storm Drain Sampled: 09/22/23 11:35 by Client
 3I22106-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D							
Batch ID: W312177	Preparation: _NONE (WETCHEM)						Analyst: mes
Total Suspended Solids	3		5	mg/l	1	09/27/23	J

Metals by EPA 200 Series Methods

Method: EPA 200.8							
Batch ID: W312183	Preparation: EPA 200.2						Analyst: tyc
Instr: ICPMS06							
Prepared: 09/27/23 12:00							
Cadmium, Total	ND	0.042	0.20	ug/l	1	09/28/23	
Copper, Total	ND	0.23	0.50	ug/l	1	09/28/23	
Lead, Total	ND	0.083	0.20	ug/l	1	09/28/23	
Silver, Total	ND	0.055	0.20	ug/l	1	09/28/23	
Zinc, Total	ND	1.7	10	ug/l	1	09/28/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B							
Batch ID: W311890	Preparation: _NONE (MICROBIOLOGY)						Analyst: atd
Instr: INC12							
Prepared: 09/22/23 15:16							
Total Coliform	ND	1.8	1.8	MPN/100mL	1	09/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2							
Batch ID: W311896	Preparation: EPA 5030B						Analyst: cam
Instr: GCMS14							
Prepared: 09/24/23 08:49							
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/25/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/25/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/25/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	09/25/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/25/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain
3I22106-01 (Water)

Sampled: 09/22/23 11:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311896		Preparation: EPA 5030B		Prepared: 09/24/23 08:49		Analyst: cam	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	ND	0.27	0.50	ug/l	1	09/25/23	
Chloromethane	0.27	0.23	0.50	ug/l	1	09/25/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain
3I22106-01 (Water)

Sampled: 09/22/23 11:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311896		Preparation: EPA 5030B		Prepared: 09/24/23 08:49		Analyst: cam	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	0.024		0.50	ug/l	1	09/25/23	J
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	09/25/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	103%	Conc: 51.5	70-130			09/25/23	
4-Bromofluorobenzene	102%	Conc: 50.9	70-130			09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain
3I22106-01RE1 (Water) Sampled: 09/22/23 11:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3K0147		Preparation: EPA 508.1/SPE		Prepared: 11/02/23 08:26			Analyst: ajc
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/15/23	O-08
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Alachlor	ND	0.026	0.20	ug/l	1	11/15/23	O-08
Aldrin	ND	0.0040	0.010	ug/l	1	11/15/23	O-08
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/15/23	O-08
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/15/23	O-08
Aroclor 1016	ND	0.048	0.10	ug/l	1	11/15/23	O-08
Aroclor 1221	ND	0.044	0.10	ug/l	1	11/15/23	O-08
Aroclor 1232	ND	0.064	0.10	ug/l	1	11/15/23	O-08
Aroclor 1242	ND	0.070	0.10	ug/l	1	11/15/23	O-08
Aroclor 1248	ND	0.049	0.10	ug/l	1	11/15/23	O-08
Aroclor 1254	ND	0.068	0.10	ug/l	1	11/15/23	O-08
Aroclor 1260	ND	0.076	0.10	ug/l	1	11/15/23	O-08
beta-BHC	ND	0.0045	0.010	ug/l	1	11/15/23	O-08
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/15/23	O-08
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/15/23	O-08
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
delta-BHC	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Dieldrin	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/15/23	O-08
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Endrin	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/15/23	O-08
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/15/23	O-08
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/15/23	O-08
Heptachlor	ND	0.0031	0.010	ug/l	1	11/15/23	O-08
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/15/23	O-08
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/15/23	O-08
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/15/23	O-08

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
 11/20/2023 16:51

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: Storm Drain
 3I22106-01RE1 (Water) Sampled: 09/22/23 11:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)							
Method: EPA 508.1				Instr: GC08			
Batch ID: W3K0147		Preparation: EPA 508.1/SPE		Prepared: 11/02/23 08:26		Analyst: ajc	
Kepone	ND	0.038	0.20	ug/l	1	11/15/23	O-08
Methoxychlor	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
Mirex	ND	0.0030	0.010	ug/l	1	11/15/23	O-08
PCBs, Total	ND	0.048	0.50	ug/l	1	11/15/23	O-08
Propachlor	ND	0.045	0.20	ug/l	1	11/15/23	O-08
Toxaphene	ND	0.37	1.0	ug/l	1	11/15/23	O-08
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/15/23	O-08
Trifluralin	ND	0.0043	0.010	ug/l	1	11/15/23	O-08
<i>Surrogate(s)</i>							
4,4-Dibromobiphenyl	67%	Conc: 0.0705	70-130			11/15/23	S-04

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:

11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W312034 - EPA 508.1											
Blank (W312034-BLK1)						Prepared: 09/26/23 Analyzed: 10/20/23					
2,4'-DDD	ND	0.0030	0.010	ug/l							
2,4'-DDE	ND	0.0030	0.010	ug/l							
2,4'-DDT	ND	0.0030	0.010	ug/l							
4,4'-DDD	ND	0.0030	0.010	ug/l							
4,4'-DDE	ND	0.0040	0.010	ug/l							
4,4'-DDT	ND	0.0030	0.010	ug/l							
Alachlor	ND	0.026	0.20	ug/l							
Aldrin	ND	0.0040	0.010	ug/l							
alpha-BHC	ND	0.0015	0.010	ug/l							
alpha-Chlordane	ND	0.0031	0.010	ug/l							
Aroclor 1016	ND	0.048	0.10	ug/l							
Aroclor 1221	ND	0.044	0.10	ug/l							
Aroclor 1232	ND	0.064	0.10	ug/l							
Aroclor 1242	ND	0.070	0.10	ug/l							
Aroclor 1248	ND	0.049	0.10	ug/l							
Aroclor 1254	ND	0.068	0.10	ug/l							
Aroclor 1260	ND	0.076	0.10	ug/l							
beta-BHC	ND	0.0045	0.010	ug/l							
Chlordane (tech)	ND	0.067	0.10	ug/l							
Chlorothalonil	ND	0.0040	0.050	ug/l							
cis-Nonachlor	ND	0.0030	0.010	ug/l							
delta-BHC	ND	0.0030	0.010	ug/l							
Dieldrin	ND	0.0030	0.010	ug/l							
Endosulfan I	ND	0.0030	0.010	ug/l							
Endosulfan II	ND	0.0019	0.010	ug/l							
Endosulfan sulfate	0.00444	0.0030	0.010	ug/l							J
Endrin	ND	0.0030	0.010	ug/l							
Endrin aldehyde	ND	0.0040	0.010	ug/l							
Endrin ketone	ND	0.0042	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l							
gamma-Chlordane	ND	0.0074	0.010	ug/l							
Heptachlor	ND	0.0031	0.010	ug/l							
Heptachlor epoxide	ND	0.0019	0.010	ug/l							
Hexachlorobenzene	ND	0.0019	0.050	ug/l							
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l							
Kepone	ND	0.038	0.20	ug/l							
Methoxychlor	0.00406	0.0030	0.010	ug/l							J
Mirex	ND	0.0030	0.010	ug/l							
PCBs, Total	ND	0.048	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:

11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W312034 - EPA 508.1 (Continued)											
Blank (W312034-BLK1)						Prepared: 09/26/23 Analyzed: 10/20/23					
Propachlor	ND	0.045	0.20	ug/l							
Toxaphene	ND	0.37	1.0	ug/l							
trans-Nonachlor	ND	0.0020	0.010	ug/l							
Trifluralin	ND	0.0043	0.010	ug/l							
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0492			ug/l	0.100		49	70-130			
LCS (W312034-BS1)						Prepared: 09/26/23 Analyzed: 10/20/23					
4,4'-DDD	0.0758	0.0030	0.010	ug/l	0.100		76	70-130			
4,4'-DDE	0.0665	0.0040	0.010	ug/l	0.100		67	70-130			
4,4'-DDT	0.0843	0.0030	0.010	ug/l	0.100		84	70-130			
Aldrin	0.0182	0.0040	0.010	ug/l	0.100		18	70-130			
alpha-BHC	0.0760	0.0015	0.010	ug/l	0.100		76	70-130			
alpha-Chlordane	0.0765	0.0031	0.010	ug/l	0.100		77	70-130			
beta-BHC	0.0744	0.0045	0.010	ug/l	0.100		74	70-130			
delta-BHC	0.0754	0.0030	0.010	ug/l	0.100		75	70-130			
Dieldrin	0.0739	0.0030	0.010	ug/l	0.100		74	70-130			
Endosulfan I	0.0705	0.0030	0.010	ug/l	0.100		70	70-130			
Endosulfan II	0.0768	0.0019	0.010	ug/l	0.100		77	70-130			
Endosulfan sulfate	0.0720	0.0030	0.010	ug/l	0.100		72	70-130			
Endrin	0.0555	0.0030	0.010	ug/l	0.100		55	70-130			
Endrin aldehyde	0.0557	0.0040	0.010	ug/l	0.100		56	70-130			
Endrin ketone	0.0921	0.0042	0.010	ug/l	0.100		92	70-130			
gamma-BHC (Lindane)	0.0773	0.0030	0.010	ug/l	0.100		77	70-130			
gamma-Chlordane	0.0771	0.0074	0.010	ug/l	0.100		77	70-130			
Heptachlor	0.0731	0.0031	0.010	ug/l	0.100		73	70-130			
Heptachlor epoxide	0.0772	0.0019	0.010	ug/l	0.100		77	70-130			
Methoxychlor	0.101	0.0030	0.010	ug/l	0.100		101	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0580			ug/l	0.100		58	70-130			
LCS (W312034-BS2)						Prepared: 09/26/23 Analyzed: 10/20/23					
4,4'-DDD	ND	0.0030	0.010	ug/l				70-130			
4,4'-DDE	ND	0.0040	0.010	ug/l				70-130			
4,4'-DDT	0.0359	0.0030	0.010	ug/l				70-130			
Aldrin	0.0141	0.0040	0.010	ug/l				70-130			
alpha-BHC	ND	0.0015	0.010	ug/l				70-130			
alpha-Chlordane	ND	0.0031	0.010	ug/l				70-130			
beta-BHC	0.0308	0.0045	0.010	ug/l				70-130			
delta-BHC	ND	0.0030	0.010	ug/l				70-130			
Dieldrin	0.00419	0.0030	0.010	ug/l				70-130			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:

11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3I2034 - EPA 508.1 (Continued)											
LCS (W3I2034-B52)						Prepared: 09/26/23 Analyzed: 10/20/23					
Endosulfan I	ND	0.0030	0.010	ug/l				70-130			
Endosulfan II	0.0274	0.0019	0.010	ug/l				70-130			
Endosulfan sulfate	0.00424	0.0030	0.010	ug/l				70-130			J
Endrin	ND	0.0030	0.010	ug/l				70-130			
Endrin aldehyde	0.0133	0.0040	0.010	ug/l				70-130			
Endrin ketone	ND	0.0042	0.010	ug/l				70-130			
gamma-BHC (Lindane)	0.00537	0.0030	0.010	ug/l				70-130			J
gamma-Chlordane	ND	0.0074	0.010	ug/l				70-130			
Heptachlor	0.0139	0.0031	0.010	ug/l				70-130			
Heptachlor epoxide	ND	0.0019	0.010	ug/l				70-130			
Methoxychlor	0.0179	0.0030	0.010	ug/l				70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0854			ug/l	0.100		85	70-130			
LCS Dup (W3I2034-BSD1)						Prepared: 09/26/23 Analyzed: 10/20/23					
4,4'-DDD	0.0781	0.0030	0.010	ug/l	0.100		78	70-130	3	30	
4,4'-DDE	0.0671	0.0040	0.010	ug/l	0.100		67	70-130	0.9	30	
4,4'-DDT	0.0860	0.0030	0.010	ug/l	0.100		86	70-130	2	30	
Aldrin	0.0257	0.0040	0.010	ug/l	0.100		26	70-130	34	30	
alpha-BHC	0.0831	0.0015	0.010	ug/l	0.100		83	70-130	9	30	
alpha-Chlordane	0.0816	0.0031	0.010	ug/l	0.100		82	70-130	6	30	
beta-BHC	0.0810	0.0045	0.010	ug/l	0.100		81	70-130	8	30	
delta-BHC	0.0788	0.0030	0.010	ug/l	0.100		79	70-130	4	30	
Dieldrin	0.0787	0.0030	0.010	ug/l	0.100		79	70-130	6	30	
Endosulfan I	0.0760	0.0030	0.010	ug/l	0.100		76	70-130	8	30	
Endosulfan II	0.0800	0.0019	0.010	ug/l	0.100		80	70-130	4	30	
Endosulfan sulfate	0.0702	0.0030	0.010	ug/l	0.100		70	70-130	3	30	
Endrin	0.0705	0.0030	0.010	ug/l	0.100		70	70-130	24	30	
Endrin aldehyde	0.0837	0.0040	0.010	ug/l	0.100		84	70-130	40	30	
Endrin ketone	0.0956	0.0042	0.010	ug/l	0.100		96	70-130	4	30	
gamma-BHC (Lindane)	0.0846	0.0030	0.010	ug/l	0.100		85	70-130	9	30	
gamma-Chlordane	0.0826	0.0074	0.010	ug/l	0.100		83	70-130	7	30	
Heptachlor	0.0800	0.0031	0.010	ug/l	0.100		80	70-130	9	30	
Heptachlor epoxide	0.0834	0.0019	0.010	ug/l	0.100		83	70-130	8	30	
Methoxychlor	0.0985	0.0030	0.010	ug/l	0.100		98	70-130	2	30	
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.0642			ug/l	0.100		64	70-130			
Batch: W3K0147 - EPA 508.1											
Blank (W3K0147-BLK1)						Prepared: 11/02/23 Analyzed: 11/15/23					
2,4'-DDD	ND	0.0030	0.010	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3K0147 - EPA 508.1 (Continued)											
Blank (W3K0147-BLK1)						Prepared: 11/02/23 Analyzed: 11/15/23					
2,4'-DDE	ND	0.0030	0.010	ug/l							
2,4'-DDT	ND	0.0030	0.010	ug/l							
4,4'-DDD	ND	0.0030	0.010	ug/l							
4,4'-DDE	ND	0.0040	0.010	ug/l							
4,4'-DDT	ND	0.0030	0.010	ug/l							
Alachlor	ND	0.026	0.20	ug/l							
Aldrin	ND	0.0040	0.010	ug/l							
alpha-BHC	ND	0.0015	0.010	ug/l							
alpha-Chlordane	ND	0.0031	0.010	ug/l							
Aroclor 1016	ND	0.048	0.10	ug/l							
Aroclor 1221	ND	0.044	0.10	ug/l							
Aroclor 1232	ND	0.064	0.10	ug/l							
Aroclor 1242	ND	0.070	0.10	ug/l							
Aroclor 1248	ND	0.049	0.10	ug/l							
Aroclor 1254	ND	0.068	0.10	ug/l							
Aroclor 1260	ND	0.076	0.10	ug/l							
beta-BHC	ND	0.0045	0.010	ug/l							
Chlordane (tech)	ND	0.067	0.10	ug/l							
Chlorothalonil	ND	0.0040	0.050	ug/l							
cis-Nonachlor	ND	0.0030	0.010	ug/l							
delta-BHC	ND	0.0030	0.010	ug/l							
Dieldrin	ND	0.0030	0.010	ug/l							
Endosulfan I	ND	0.0030	0.010	ug/l							
Endosulfan II	ND	0.0019	0.010	ug/l							
Endosulfan sulfate	ND	0.0030	0.010	ug/l							
Endrin	ND	0.0030	0.010	ug/l							
Endrin aldehyde	ND	0.0040	0.010	ug/l							
Endrin ketone	ND	0.0042	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l							
gamma-Chlordane	ND	0.0074	0.010	ug/l							
Heptachlor	ND	0.0031	0.010	ug/l							
Heptachlor epoxide	ND	0.0019	0.010	ug/l							
Hexachlorobenzene	ND	0.0019	0.050	ug/l							
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l							
Kepone	ND	0.038	0.20	ug/l							
Methoxychlor	ND	0.0030	0.010	ug/l							
Mirex	ND	0.0030	0.010	ug/l							
PCBs, Total	ND	0.048	0.50	ug/l							
Propachlor	ND	0.045	0.20	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:

11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3K0147 - EPA 508.1 (Continued)										
Blank (W3K0147-BLK1)					Prepared: 11/02/23 Analyzed: 11/15/23					
Toxaphene	ND	0.37	1.0	ug/l						
trans-Nonachlor	ND	0.0020	0.010	ug/l						
Trifluralin	ND	0.0043	0.010	ug/l						
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0933			ug/l	0.100		93 70-130			
LCS (W3K0147-BS1)					Prepared: 11/02/23 Analyzed: 11/15/23					
4,4'-DDD	0.117	0.0030	0.010	ug/l	0.100		117 70-130			
4,4'-DDE	0.0874	0.0040	0.010	ug/l	0.100		87 70-130			
4,4'-DDT	0.103	0.0030	0.010	ug/l	0.100		103 70-130			
Aldrin	0.0689	0.0040	0.010	ug/l	0.100		69 50-130			
alpha-BHC	0.108	0.0015	0.010	ug/l	0.100		108 70-130			
alpha-Chlordane	0.111	0.0031	0.010	ug/l	0.100		111 70-130			
beta-BHC	0.105	0.0045	0.010	ug/l	0.100		105 70-130			
delta-BHC	0.115	0.0030	0.010	ug/l	0.100		115 70-130			
Dieldrin	0.104	0.0030	0.010	ug/l	0.100		104 70-130			
Endosulfan I	0.106	0.0030	0.010	ug/l	0.100		106 70-130			
Endosulfan II	0.109	0.0019	0.010	ug/l	0.100		109 70-130			
Endosulfan sulfate	0.0804	0.0030	0.010	ug/l	0.100		80 70-130			
Endrin	0.104	0.0030	0.010	ug/l	0.100		104 70-130			
Endrin aldehyde	0.0949	0.0040	0.010	ug/l	0.100		95 70-130			
Endrin ketone	0.124	0.0042	0.010	ug/l	0.100		124 70-130			
gamma-BHC (Lindane)	0.110	0.0030	0.010	ug/l	0.100		110 70-130			
gamma-Chlordane	0.112	0.0074	0.010	ug/l	0.100		112 70-130			
Heptachlor	0.105	0.0031	0.010	ug/l	0.100		105 70-130			
Heptachlor epoxide	0.108	0.0019	0.010	ug/l	0.100		108 70-130			
Methoxychlor	0.102	0.0030	0.010	ug/l	0.100		102 70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.104			ug/l	0.100		104 70-130			
LCS (W3K0147-BS2)					Prepared: 11/02/23 Analyzed: 11/15/23					
Toxaphene	0.833	0.37	1.0	ug/l	1.00		83 70-130			J
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0966			ug/l	0.100		97 70-130			
LCS Dup (W3K0147-BS1)					Prepared: 11/02/23 Analyzed: 11/15/23					
4,4'-DDD	0.108	0.0030	0.010	ug/l	0.100		108 70-130	9	30	
4,4'-DDE	0.0810	0.0040	0.010	ug/l	0.100		81 70-130	8	30	
4,4'-DDT	0.0935	0.0030	0.010	ug/l	0.100		94 70-130	10	30	
Aldrin	0.0663	0.0040	0.010	ug/l	0.100		66 50-130	4	30	
alpha-BHC	0.0980	0.0015	0.010	ug/l	0.100		98 70-130	10	30	
alpha-Chlordane	0.102	0.0031	0.010	ug/l	0.100		102 70-130	8	30	
beta-BHC	0.0956	0.0045	0.010	ug/l	0.100		96 70-130	9	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3K0147 - EPA 508.1 (Continued)											
LCS Dup (W3K0147-BSD1)						Prepared: 11/02/23 Analyzed: 11/15/23					
delta-BHC	0.104	0.0030	0.010	ug/l	0.100		104	70-130	10	30	
Dieldrin	0.0941	0.0030	0.010	ug/l	0.100		94	70-130	10	30	
Endosulfan I	0.0771	0.0030	0.010	ug/l	0.100		77	70-130	31	30	Q-12
Endosulfan II	0.0839	0.0019	0.010	ug/l	0.100		84	70-130	26	30	
Endosulfan sulfate	0.0742	0.0030	0.010	ug/l	0.100		74	70-130	8	30	
Endrin	0.0960	0.0030	0.010	ug/l	0.100		96	70-130	8	30	
Endrin aldehyde	0.0869	0.0040	0.010	ug/l	0.100		87	70-130	9	30	
Endrin ketone	0.113	0.0042	0.010	ug/l	0.100		113	70-130	10	30	
gamma-BHC (Lindane)	0.0998	0.0030	0.010	ug/l	0.100		100	70-130	10	30	
gamma-Chlordane	0.102	0.0074	0.010	ug/l	0.100		102	70-130	9	30	
Heptachlor	0.0977	0.0031	0.010	ug/l	0.100		98	70-130	7	30	
Heptachlor epoxide	0.0999	0.0019	0.010	ug/l	0.100		100	70-130	8	30	
Methoxychlor	0.0956	0.0030	0.010	ug/l	0.100		96	70-130	7	30	
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.104			ug/l	0.100		104	70-130			

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3I2177 - SM 2540D											
Blank (W3I2177-BLK1)						Prepared & Analyzed: 09/27/23					
Total Suspended Solids	0.200		5	mg/l							J
LCS (W3I2177-BS1)						Prepared & Analyzed: 09/27/23					
Total Suspended Solids	59.0		5	mg/l	61.1		97	90-110			
Duplicate (W3I2177-DUP1)						Prepared & Analyzed: 09/27/23					
Total Suspended Solids	6.80		5	mg/l					200	10	
Duplicate (W3I2177-DUP2)						Prepared & Analyzed: 09/27/23					
Total Suspended Solids	5.60		5	mg/l		5.40			4	10	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:

11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W312183 - EPA 200.8											
Blank (W312183-BLK1)											
					Prepared: 09/27/23 Analyzed: 09/28/23						
Cadmium, Total	ND	0.042	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Silver, Total	ND	0.055	0.20	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W312183-BS1)											
					Prepared: 09/27/23 Analyzed: 09/28/23						
Cadmium, Total	49.0	0.042	0.20	ug/l	50.0		98	85-115			
Copper, Total	52.5	0.23	0.50	ug/l	50.0		105	85-115			
Lead, Total	48.9	0.083	0.20	ug/l	50.0		98	85-115			
Silver, Total	49.3	0.055	0.20	ug/l	50.0		99	85-115			
Zinc, Total	49.3	1.7	10	ug/l	50.0		99	85-115			
Duplicate (W312183-DUP1)											
					Source: 3125066-02						
					Prepared: 09/27/23 Analyzed: 09/28/23						
Cadmium, Total	ND	0.042	0.20	ug/l		ND					30
Copper, Total	ND	0.23	0.50	ug/l		ND					30
Lead, Total	ND	0.083	0.20	ug/l		ND					30
Silver, Total	ND	0.055	0.20	ug/l		ND					30
Zinc, Total	ND	1.7	10	ug/l		ND					30
Matrix Spike (W312183-MS1)											
					Source: 3118017-01						
					Prepared: 09/27/23 Analyzed: 09/28/23						
Cadmium, Total	48.0	0.042	0.20	ug/l	50.0	ND	96	70-130			
Copper, Total	47.6	0.23	0.50	ug/l	50.0	ND	95	70-130			
Lead, Total	50.6	0.083	0.20	ug/l	50.0	ND	101	70-130			
Silver, Total	47.2	0.055	0.20	ug/l	50.0	ND	94	70-130			
Zinc, Total	47.5	1.7	10	ug/l	50.0	ND	95	70-130			
Matrix Spike (W312183-MS2)											
					Source: 3118017-04						
					Prepared: 09/27/23 Analyzed: 09/28/23						
Cadmium, Total	47.9	0.042	0.20	ug/l	50.0	ND	96	70-130			
Copper, Total	49.3	0.23	0.50	ug/l	50.0	ND	99	70-130			
Lead, Total	49.9	0.083	0.20	ug/l	50.0	ND	100	70-130			
Silver, Total	47.1	0.055	0.20	ug/l	50.0	ND	94	70-130			
Zinc, Total	48.3	1.7	10	ug/l	50.0	ND	97	70-130			
Matrix Spike Dup (W312183-MSD1)											
					Source: 3118017-01						
					Prepared: 09/27/23 Analyzed: 09/28/23						
Cadmium, Total	47.6	0.042	0.20	ug/l	50.0	ND	95	70-130	0.7		30
Copper, Total	47.9	0.23	0.50	ug/l	50.0	ND	96	70-130	0.5		30
Lead, Total	50.7	0.083	0.20	ug/l	50.0	ND	101	70-130	0.2		30
Silver, Total	46.7	0.055	0.20	ug/l	50.0	ND	93	70-130	1		30
Zinc, Total	47.2	1.7	10	ug/l	50.0	ND	94	70-130	0.7		30
Matrix Spike Dup (W312183-MSD2)											
					Source: 3118017-04						
					Prepared: 09/27/23 Analyzed: 09/28/23						
Cadmium, Total	48.0	0.042	0.20	ug/l	50.0	ND	96	70-130	0.09		30
Copper, Total	49.6	0.23	0.50	ug/l	50.0	ND	99	70-130	0.6		30

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:

11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W312183 - EPA 200.8 (Continued)												
Matrix Spike Dup (W312183-MSD2)			Source: 3118017-04			Prepared: 09/27/23 Analyzed: 09/28/23						
Lead, Total	50.1	0.083	0.20	ug/l	50.0	ND	100	70-130	0.4	30		
Silver, Total	47.3	0.055	0.20	ug/l	50.0	ND	95	70-130	0.4	30		
Zinc, Total	48.0	1.7	10	ug/l	50.0	ND	96	70-130	0.5	30		

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W311890 - SM 9221B												
Blank (W311890-BLK1)			Prepared: 09/22/23 Analyzed: 09/24/23									
Total Coliform	ND	1.8	1.8	MPN/100m L								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2											
Blank (W311896-BLK1)					Prepared & Analyzed: 09/24/23						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
Blank (W311896-BLK1)						Prepared & Analyzed: 09/24/23					
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND	0.50	0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	49.5			ug/l	50.0		99	70-130			
4-Bromofluorobenzene	49.2			ug/l	50.0		98	70-130			
LCS (W311896-BS1)						Prepared & Analyzed: 09/24/23					
1,1,1,2-Tetrachloroethane	4.93	0.24	0.50	ug/l	5.00		99	70-130			
1,1,1-Trichloroethane	4.53	0.26	0.50	ug/l	5.00		91	70-130			
1,1,2,2-Tetrachloroethane	5.00	0.20	0.50	ug/l	5.00		100	70-130			
1,1,2-Trichloroethane	4.73	0.19	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethane	4.96	0.27	0.50	ug/l	5.00		99	70-130			
1,1-Dichloroethene	4.79	0.16	0.50	ug/l	5.00		96	70-130			
1,1-Dichloropropene	4.33	0.14	0.50	ug/l	5.00		87	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
LCS (W311896-B51)					Prepared & Analyzed: 09/24/23						
1,2,3-Trichlorobenzene	5.29	0.40	0.50	ug/l	5.00		106	70-130			
1,2,4-Trichlorobenzene	5.05	0.17	0.50	ug/l	5.00		101	70-130			
1,2,4-Trimethylbenzene	5.15	0.20	0.50	ug/l	5.00		103	70-130			
1,2-Dichloroethane	4.58	0.24	0.50	ug/l	5.00		92	70-130			
1,2-Dichloropropane	4.63	0.13	0.50	ug/l	5.00		93	70-130			
1,3,5-Trimethylbenzene	5.32	0.17	0.50	ug/l	5.00		106	70-130			
1,3-Dichloropropane	4.83	0.27	0.50	ug/l	5.00		97	70-130			
2,2-Dichloropropane	4.45	0.17	0.50	ug/l	5.00		89	70-130			
2-Butanone	4.00	1.5	5.0	ug/l	5.00		80	70-130			J
2-Chlorotoluene	5.25	0.15	0.50	ug/l	5.00		105	70-130			
2-Hexanone	4.38	1.2	5.0	ug/l	5.00		88	70-130			J
4-Chlorotoluene	5.16	0.15	0.50	ug/l	5.00		103	70-130			
4-Methyl-2-pentanone	4.46	1.8	5.0	ug/l	5.00		89	70-130			J
Benzene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.91	0.15	0.50	ug/l	5.00		98	70-130			
Bromochloromethane	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromodichloromethane	4.38	0.24	0.50	ug/l	5.00		88	70-130			
Bromoform	4.70	0.38	0.50	ug/l	5.00		94	70-130			
Bromomethane	4.64	0.27	0.50	ug/l	5.00		93	70-130			
Carbon tetrachloride	4.34	0.27	0.50	ug/l	5.00		87	70-130			
Chlorobenzene	4.88	0.15	0.50	ug/l	5.00		98	70-130			
Chloroethane	4.57	0.17	0.50	ug/l	5.00		91	70-130			
Chloroform	4.70	0.27	0.50	ug/l	5.00		94	70-130			
Chloromethane	4.68	0.23	0.50	ug/l	5.00		94	70-130			
cis-1,2-Dichloroethene	4.72	0.25	0.50	ug/l	5.00		94	70-130			
cis-1,3-Dichloropropene	4.76	0.30	0.50	ug/l	5.00		95	70-130			
Dibromochloromethane	4.87	0.20	0.50	ug/l	5.00		97	70-130			
Dibromomethane	4.62	0.20	0.50	ug/l	5.00		92	70-130			
Dichlorodifluoromethane (Freon 12)	4.37	0.45	0.50	ug/l	5.00		87	70-130			
Di-isopropyl ether	18.8	1.1	2.0	ug/l	20.0		94	70-130			
Ethyl tert-butyl ether	20.1	1.0	2.0	ug/l	20.0		100	70-130			
Ethylbenzene	4.62	0.21	0.50	ug/l	5.00		92	70-130			
Freon 113	4.61	1.5	5.0	ug/l	5.00		92	70-130			J
Hexachlorobutadiene	4.91	0.40	0.50	ug/l	5.00		98	70-130			
Isopropylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130			
m,p-Xylene	4.63	0.33	0.50	ug/l	5.00		93	70-130			
m-Dichlorobenzene	5.21	0.14	0.50	ug/l	5.00		104	70-130			
Methyl tert-butyl ether (MTBE)	19.1	0.94	2.0	ug/l	20.0		96	70-130			
Methylene chloride	4.72	0.30	0.50	ug/l	5.00		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
LCS (W311896-BS1)					Prepared & Analyzed: 09/24/23						
Naphthalene	4.52	0.35	0.50	ug/l	5.00		90	70-130			
n-Butylbenzene	4.94	0.29	0.50	ug/l	5.00		99	70-130			
n-Propylbenzene	5.39	0.18	0.50	ug/l	5.00		108	70-130			
o-Dichlorobenzene	4.95	0.19	0.50	ug/l	5.00		99	70-130			
o-Xylene	4.62	0.20	0.50	ug/l	5.00		92	70-130			
p-Dichlorobenzene	5.17	0.18	0.50	ug/l	5.00		103	70-130			
p-Isopropyltoluene	5.14	0.25	0.50	ug/l	5.00		103	70-130			
sec-Butylbenzene	4.65	0.24	0.50	ug/l	5.00		93	70-130			
Styrene	4.84	0.19	0.50	ug/l	5.00		97	70-130			
Tert-amyl methyl ether	19.8	0.59	2.0	ug/l	20.0		99	70-130			
tert-Butylbenzene	4.64	0.18	0.50	ug/l	5.00		93	70-130			
Tetrachloroethene	4.82	0.18	0.50	ug/l	5.00		96	70-130			
Toluene	5.07	0.29	0.50	ug/l	5.00		101	70-130			
trans-1,2-Dichloroethene	4.78	0.26	0.50	ug/l	5.00		96	70-130			
trans-1,3-Dichloropropene	4.33	0.32	0.50	ug/l	5.00		87	70-130			
Trichloroethene	4.68	0.18	0.50	ug/l	5.00		94	70-130			
Trichlorofluoromethane	4.72	0.18	0.50	ug/l	5.00		94	70-130			
Vinyl chloride	4.54	0.18	0.50	ug/l	5.00		91	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	51.0			ug/l	50.0		102	70-130			
4-Bromofluorobenzene	49.1			ug/l	50.0		98	70-130			
LCS Dup (W311896-BSD1)					Prepared & Analyzed: 09/24/23						
1,1,1,2-Tetrachloroethane	5.17	0.24	0.50	ug/l	5.00		103	70-130	5	30	
1,1,1-Trichloroethane	5.21	0.26	0.50	ug/l	5.00		104	70-130	14	30	
1,1,2,2-Tetrachloroethane	5.13	0.20	0.50	ug/l	5.00		103	70-130	3	30	
1,1,2-Trichloroethane	5.02	0.19	0.50	ug/l	5.00		100	70-130	6	30	
1,1-Dichloroethane	5.08	0.27	0.50	ug/l	5.00		102	70-130	2	30	
1,1-Dichloroethene	5.19	0.16	0.50	ug/l	5.00		104	70-130	8	30	
1,1-Dichloropropene	5.06	0.14	0.50	ug/l	5.00		101	70-130	16	30	
1,2,3-Trichlorobenzene	5.44	0.40	0.50	ug/l	5.00		109	70-130	3	30	
1,2,4-Trichlorobenzene	5.19	0.17	0.50	ug/l	5.00		104	70-130	3	30	
1,2,4-Trimethylbenzene	5.43	0.20	0.50	ug/l	5.00		109	70-130	5	30	
1,2-Dichloroethane	4.88	0.24	0.50	ug/l	5.00		98	70-130	6	30	
1,2-Dichloropropane	4.95	0.13	0.50	ug/l	5.00		99	70-130	7	30	
1,3,5-Trimethylbenzene	5.82	0.17	0.50	ug/l	5.00		116	70-130	9	30	
1,3-Dichloropropane	5.20	0.27	0.50	ug/l	5.00		104	70-130	7	30	
2,2-Dichloropropane	5.12	0.17	0.50	ug/l	5.00		102	70-130	14	30	
2-Butanone	4.75	1.5	5.0	ug/l	5.00		95	70-130	17	30	J
2-Chlorotoluene	5.59	0.15	0.50	ug/l	5.00		112	70-130	6	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
LCS Dup (W311896-BSD1)					Prepared & Analyzed: 09/24/23						
2-Hexanone	4.70	1.2	5.0	ug/l	5.00		94	70-130	7	30	J
4-Chlorotoluene	5.55	0.15	0.50	ug/l	5.00		111	70-130	7	30	
4-Methyl-2-pentanone	4.75	1.8	5.0	ug/l	5.00		95	70-130	6	30	J
Benzene	5.05	0.15	0.50	ug/l	5.00		101	70-130	8	30	
Bromobenzene	5.17	0.15	0.50	ug/l	5.00		103	70-130	5	30	
Bromochloromethane	5.16	0.15	0.50	ug/l	5.00		103	70-130	6	30	
Bromodichloromethane	4.71	0.24	0.50	ug/l	5.00		94	70-130	7	30	
Bromoform	4.96	0.38	0.50	ug/l	5.00		99	70-130	5	30	
Bromomethane	5.03	0.27	0.50	ug/l	5.00		101	70-130	8	30	
Carbon tetrachloride	5.03	0.27	0.50	ug/l	5.00		101	70-130	15	30	
Chlorobenzene	5.14	0.15	0.50	ug/l	5.00		103	70-130	5	30	
Chloroethane	5.10	0.17	0.50	ug/l	5.00		102	70-130	11	30	
Chloroform	5.02	0.27	0.50	ug/l	5.00		100	70-130	7	30	
Chloromethane	4.96	0.23	0.50	ug/l	5.00		99	70-130	6	30	
cis-1,2-Dichloroethene	5.13	0.25	0.50	ug/l	5.00		103	70-130	8	30	
cis-1,3-Dichloropropene	5.04	0.30	0.50	ug/l	5.00		101	70-130	6	30	
Dibromochloromethane	4.98	0.20	0.50	ug/l	5.00		100	70-130	2	30	
Dibromomethane	4.87	0.20	0.50	ug/l	5.00		97	70-130	5	30	
Dichlorodifluoromethane (Freon 12)	4.88	0.45	0.50	ug/l	5.00		98	70-130	11	30	
Di-isopropyl ether	20.6	1.1	2.0	ug/l	20.0		103	70-130	9	30	
Ethyl tert-butyl ether	22.1	1.0	2.0	ug/l	20.0		111	70-130	10	30	
Ethylbenzene	5.03	0.21	0.50	ug/l	5.00		101	70-130	9	30	
Freon 113	5.31	1.5	5.0	ug/l	5.00		106	70-130	14	30	
Hexachlorobutadiene	5.25	0.40	0.50	ug/l	5.00		105	70-130	7	30	
Isopropylbenzene	4.99	0.18	0.50	ug/l	5.00		100	70-130	9	30	
m,p-Xylene	5.05	0.33	0.50	ug/l	5.00		101	70-130	9	30	
m-Dichlorobenzene	5.36	0.14	0.50	ug/l	5.00		107	70-130	3	30	
Methyl tert-butyl ether (MTBE)	20.9	0.94	2.0	ug/l	20.0		105	70-130	9	30	
Methylene chloride	5.03	0.30	0.50	ug/l	5.00		101	70-130	6	30	
Naphthalene	4.66	0.35	0.50	ug/l	5.00		93	70-130	3	30	
n-Butylbenzene	5.36	0.29	0.50	ug/l	5.00		107	70-130	8	30	
n-Propylbenzene	5.90	0.18	0.50	ug/l	5.00		118	70-130	9	30	
o-Dichlorobenzene	5.13	0.19	0.50	ug/l	5.00		103	70-130	4	30	
o-Xylene	4.98	0.20	0.50	ug/l	5.00		100	70-130	8	30	
p-Dichlorobenzene	5.41	0.18	0.50	ug/l	5.00		108	70-130	5	30	
p-Isopropyltoluene	5.53	0.25	0.50	ug/l	5.00		111	70-130	7	30	
sec-Butylbenzene	5.08	0.24	0.50	ug/l	5.00		102	70-130	9	30	
Styrene	5.12	0.19	0.50	ug/l	5.00		102	70-130	6	30	
Tert-amyl methyl ether	21.7	0.59	2.0	ug/l	20.0		109	70-130	9	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
 11/20/2023 16:51

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
LCS Dup (W311896-BSD1)					Prepared & Analyzed: 09/24/23						
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101	70-130	9	30	
Tetrachloroethene	5.37	0.18	0.50	ug/l	5.00		107	70-130	11	30	
Toluene	5.49	0.29	0.50	ug/l	5.00		110	70-130	8	30	
trans-1,2-Dichloroethene	5.28	0.26	0.50	ug/l	5.00		106	70-130	10	30	
trans-1,3-Dichloropropene	4.59	0.32	0.50	ug/l	5.00		92	70-130	6	30	
Trichloroethene	5.18	0.18	0.50	ug/l	5.00		104	70-130	10	30	
Trichlorofluoromethane	5.46	0.18	0.50	ug/l	5.00		109	70-130	14	30	
Vinyl chloride	5.22	0.18	0.50	ug/l	5.00		104	70-130	14	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.2			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	52.4			ug/l	50.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Greensand Performance

Reported:
 11/20/2023 16:51

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
O-08	The original extraction and/or analysis of this sample yielded QC recoveries outside acceptance criteria. It was re-extracted/re-analyzed after the recommended maximum hold time.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Sample Receipt Checklist



Week WKO: 3122106

WKO Logged by: Jaime Gomez

Samples Checked by: Jaime Gomez

Date/Time Received: 09/22/23 14:25

of Samples: 01

Delivered by: Client

Task

Comments

N/A

No

Yes

COC

COC present at receipt?

Yes No

COC properly completed?

Yes No

COC matches sample labels?

Yes No

Project Manager notified about COC discrepancy?

Yes No

Receipt Information

Sample Temperature

20°C

Samples received on ice?

Yes No

Ice Type (Blue/Wet)

Yes No

All samples intact?

Yes No

Samples in proper containers?

Yes No

Sufficient sample volume?

Yes No

Samples intact?

Yes No

Received within holding time?

Yes No

Project Manager notified about receipt info?

Yes No

Sample labels checked for correct preservation?

Yes No

VOC Headspace: (No) none, If Yes (see comment)
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT

Yes No

pH verified upon receipt?
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1,
525.2<2; 67108<2; 608.3 5-9

Yes No

Free Chlorine Tested <0.1 (Organics Analyses)

Yes No

O&G pH <2 verified?

Yes No

pH adjusted for O&G

Yes No

Project Manager notified about sample preservation?

Yes No

PM Comments

Signature: *Jaime Gomez*
Sample Receipt Checklist Completed by:

Date: 09/22/23

Sample Receipt Checklist



Week WKO: 3122106

WKO Logged by: Jaime Gomez

Samples Checked by: Jaime Gomez

Date/Time Received: 09/22/23 14:25

of Samples: 01

Delivered by: Client

Task Yes No N/A Comments

COC

COC present at receipt?

COC properly completed?

COC matches sample labels?

Project Manager notified about COC discrepancy?

Receipt Information

Sample Temperature 20°C

Samples received on ice?

Ice Type (Blue/Wet)

All samples intact?

Samples in proper containers?

Sufficient sample volume?

Samples intact?

Received within holding time?

Project Manager notified about receipt info?

Sample Preservation Verification?

Sample labels checked for correct preservation?

VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT

pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2; 67108<2; 608.3 5-9

Free Chlorine Tested <0.1 (Organics Analyses)

O&G pH <2 verified?

pH adjusted for O&G

Project Manager notified about sample preservation?

PM Comments

Signature: *Jaime Gomez*
Sample Receipt Checklist Completed by:

Date: 09/22/23

Work Orders: 3122107

Report Date: 11/08/2023

Project: COSM 97-005 - COPCs

Received Date: 09/22/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

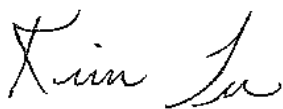
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 9/22/23 with the Chain-of-Custody document. The samples were received in good condition, at 20.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 11/08/2023 17:35

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-SW12-S4	Client	3I22107-01	Water	09/22/23 12:35	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFUnA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDoA	307-55-1		✓
PFTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

11/08/2023 17:35

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-SW12-S4
3I22107-01 (Water) Sampled: 09/22/23 12:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12	
Batch ID: W3I2109	Preparation: EPA 5030B	Prepared: 09/26/23 14:50	Analyst: ADM
1,2,3-Trichloropropane	0.040	0.0012	0.0050 ug/l 1 09/26/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06	
Batch ID: W3J0125	Preparation: EPA 537/SPE	Prepared: 10/03/23 08:55	Analyst: jna
11CI-PF3OUdS	ND	0.51	1.8 ng/l 1 10/06/23
9CI-PF3ONS	ND	0.48	1.8 ng/l 1 10/06/23
ADONA	ND	0.50	1.8 ng/l 1 10/06/23
EtFOSAA	ND	0.43	1.8 ng/l 1 10/06/23
HFPO-DA	ND	0.79	1.8 ng/l 1 10/06/23
MeFOSAA	ND	0.52	1.8 ng/l 1 10/06/23
PFBS	1.8	0.52	1.8 ng/l 1 10/06/23 J
PFDA	ND	0.41	1.8 ng/l 1 10/06/23
PFDoA	ND	0.59	1.8 ng/l 1 10/06/23
PFHpA	0.60	0.48	1.8 ng/l 1 10/06/23 J
PFHxA	2.2	0.44	1.8 ng/l 1 10/06/23
PFHxS	1.4	0.54	1.8 ng/l 1 10/06/23 J
PFNA	ND	0.47	1.8 ng/l 1 10/06/23
PFOA	0.70	0.60	1.8 ng/l 1 10/06/23 J
PFOS	ND	0.48	1.8 ng/l 1 10/06/23
PFTeDA	ND	0.41	1.8 ng/l 1 10/06/23
PFTTrDA	ND	0.38	1.8 ng/l 1 10/06/23
PFUnA	ND	0.43	1.8 ng/l 1 10/06/23

Surrogate(s)

13C2-PFDA	111%	Conc: 40.2	70-130	10/06/23
13C2-PFHxA	111%	Conc: 40.2	70-130	10/06/23
d5-EtFOSAA	125%	Conc: 181	70-130	10/06/23
HFPO-DA-13C3	106%	Conc: 38.4	70-130	10/06/23

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS14	
Batch ID: W3I1896	Preparation: EPA 5030B	Prepared: 09/24/23 08:49	Analyst: cam
1,1,1,2-Tetrachloroethane	ND	0.24	0.50 ug/l 1 09/25/23
1,1,1-Trichloroethane	ND	0.26	0.50 ug/l 1 09/25/23
1,1,2,2-Tetrachloroethane	ND	0.20	0.50 ug/l 1 09/25/23
1,1,2-Trichloroethane	ND	0.19	0.50 ug/l 1 09/25/23
1,1-Dichloroethane	1.2	0.27	0.50 ug/l 1 09/25/23
1,1-Dichloroethene	7.4	0.16	0.50 ug/l 1 09/25/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW12-S4
3I22107-01 (Water) Sampled: 09/22/23 12:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS14							
Batch ID: W311896		Preparation: EPA 5030B		Prepared: 09/24/23 08:49			Analyst: cam
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Acetone	ND	3.1	5.0	ug/l	1	09/25/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	1.5	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	7.7	0.27	0.50	ug/l	1	09/25/23	
Chloromethane	ND	0.23	0.50	ug/l	1	09/25/23	
cis-1,2-Dichloroethene	2.1	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

11/08/2023 17:35

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-SW12-S4
 3I22107-01 (Water) Sampled: 09/22/23 12:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311896		Preparation: EPA 5030B		Prepared: 09/24/23 08:49		Analyst: cam	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	1.9	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	7.7		0.50	ug/l	1	09/25/23	
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	77	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	0.43	0.18	0.50	ug/l	1	09/25/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	100%	Conc: 49.8	70-130			09/25/23	
4-Bromofluorobenzene	98%	Conc: 49.2	70-130			09/25/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 11/08/2023 17:35

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-SW12-S4
 3I22107-01RE1 (Water) Sampled: 09/22/23 12:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W311902		Preparation: EPA 522/SPE		Prepared: 09/25/23 08:03		Analyst: mld	
1,4-Dioxane	49	1.4	3.5	ug/l	50	10/02/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 9.49	70-130			10/02/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311902 - EPA 522											
Blank (W311902-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
Prepared: 09/25/23 Analyzed: 10/01/23											
Surrogate(s)											
1,4-Dioxane-d8	8.81			ug/l	10.0		88	70-130			
LCS (W311902-BS1)											
1,4-Dioxane	0.376	0.028	0.070	ug/l	0.400		94	70-130			
Prepared: 09/25/23 Analyzed: 10/01/23											
Surrogate(s)											
1,4-Dioxane-d8	10.9			ug/l	10.0		109	70-130			
LCS Dup (W311902-BSD1)											
1,4-Dioxane	0.368	0.028	0.070	ug/l	0.400		92	70-130	2	30	
Prepared: 09/25/23 Analyzed: 10/01/23											
Surrogate(s)											
1,4-Dioxane-d8	9.75			ug/l	10.0		98	70-130			

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W312109 - SRL 524M-TCP											
Blank (W312109-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
Prepared & Analyzed: 09/26/23											
LCS (W312109-BS1)											
1,2,3-Trichloropropane	0.0197	0.0012	0.0050	ug/l	0.0200		98	80-120			
Prepared & Analyzed: 09/26/23											
LCS Dup (W312109-BSD1)											
1,2,3-Trichloropropane	0.0210	0.0012	0.0050	ug/l	0.0200		105	80-120	7	20	
Prepared & Analyzed: 09/26/23											
Duplicate (W312109-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
Source: 3108004-01											

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0125 - EPA 537.1											
Blank (W3J0125-BLK1)						Prepared: 10/03/23 Analyzed: 10/06/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	42.2			ng/l	40.0		106	70-130			
13C2-PFHxA	44.0			ng/l	40.0		110	70-130			
d5-EtFOSAA	192			ng/l	160		120	70-130			
HFPO-DA-13C3	42.0			ng/l	40.0		105	70-130			
LCS (W3J0125-BS1)						Prepared: 10/03/23 Analyzed: 10/06/23					
11CI-PF3OUdS	83.6	0.56	2.0	ng/l	80.0		105	70-130			
9CI-PF3ONS	86.9	0.53	2.0	ng/l	80.0		109	70-130			
ADONA	86.2	0.55	2.0	ng/l	80.0		108	70-130			
EtFOSAA	89.3	0.48	2.0	ng/l	80.0		112	70-130			
HFPO-DA	83.7	0.87	2.0	ng/l	80.0		105	70-130			
MeFOSAA	88.2	0.58	2.0	ng/l	80.0		110	70-130			
PFBS	89.1	0.58	2.0	ng/l	80.0		111	70-130			
PFDA	83.1	0.45	2.0	ng/l	80.0		104	70-130			
PFDoA	87.1	0.66	2.0	ng/l	80.0		109	70-130			
PFHpA	87.1	0.53	2.0	ng/l	80.0		109	70-130			
PFHxA	86.4	0.49	2.0	ng/l	80.0		108	70-130			
PFHxS	88.8	0.59	2.0	ng/l	80.0		111	70-130			
PFNA	88.6	0.52	2.0	ng/l	80.0		111	70-130			
PFOA	91.7	0.67	2.0	ng/l	80.0		115	70-130			
PFOS	87.7	0.53	2.0	ng/l	80.0		110	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0125 - EPA 537.1 (Continued)										
LCS (W3J0125-BS1)					Prepared: 10/03/23 Analyzed: 10/06/23					
PFTeDA	84.4	0.45	2.0	ng/l	80.0		106 70-130			
PFTTrDA	81.3	0.42	2.0	ng/l	80.0		102 70-130			
PFUnA	85.8	0.48	2.0	ng/l	80.0		107 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	41.8			ng/l	40.0		104 70-130			
13C2-PFHxA	43.7			ng/l	40.0		109 70-130			
d5-EtFOSAA	191			ng/l	160		119 70-130			
HFPO-DA-13C3	42.8			ng/l	40.0		107 70-130			
LCS Dup (W3J0125-BSD1)					Prepared: 10/03/23 Analyzed: 10/06/23					
11CI-PF3OUdS	85.0	0.56	2.0	ng/l	80.0		106 70-130	2	30	
9CI-PF3ONS	85.1	0.53	2.0	ng/l	80.0		106 70-130	2	30	
ADONA	85.6	0.55	2.0	ng/l	80.0		107 70-130	0.8	30	
EtFOSAA	89.5	0.48	2.0	ng/l	80.0		112 70-130	0.2	30	
HFPO-DA	82.7	0.87	2.0	ng/l	80.0		103 70-130	1	30	
MeFOSAA	86.1	0.58	2.0	ng/l	80.0		108 70-130	2	30	
PFBS	87.1	0.58	2.0	ng/l	80.0		109 70-130	2	30	
PFDA	85.5	0.45	2.0	ng/l	80.0		107 70-130	3	30	
PFDoA	89.9	0.66	2.0	ng/l	80.0		112 70-130	3	30	
PFHpA	87.7	0.53	2.0	ng/l	80.0		110 70-130	0.8	30	
PFHxA	85.8	0.49	2.0	ng/l	80.0		107 70-130	0.7	30	
PFHxS	86.9	0.59	2.0	ng/l	80.0		109 70-130	2	30	
PFNA	88.1	0.52	2.0	ng/l	80.0		110 70-130	0.6	30	
PFOA	90.0	0.67	2.0	ng/l	80.0		112 70-130	2	30	
PFOS	87.2	0.53	2.0	ng/l	80.0		109 70-130	0.5	30	
PFTeDA	86.1	0.45	2.0	ng/l	80.0		108 70-130	2	30	
PFTTrDA	85.1	0.42	2.0	ng/l	80.0		106 70-130	5	30	
PFUnA	88.5	0.48	2.0	ng/l	80.0		111 70-130	3	30	
<i>Surrogate(s)</i>										
13C2-PFDA	43.4			ng/l	40.0		109 70-130			
13C2-PFHxA	43.7			ng/l	40.0		109 70-130			
d5-EtFOSAA	191			ng/l	160		119 70-130			
HFPO-DA-13C3	42.4			ng/l	40.0		106 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W311896 - EPA 524.2												
Blank (W311896-BLK1)					Prepared & Analyzed: 09/24/23							
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l								
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l								
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l								
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l								
1,1-Dichloroethane	ND	0.27	0.50	ug/l								
1,1-Dichloroethene	ND	0.16	0.50	ug/l								
1,1-Dichloropropene	ND	0.14	0.50	ug/l								
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l								
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l								
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l								
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l								
1,2-Dichloroethane	ND	0.24	0.50	ug/l								
1,2-Dichloropropane	ND	0.13	0.50	ug/l								
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l								
1,3-Dichloropropane	ND	0.27	0.50	ug/l								
1,3-Dichloropropene, Total	ND		0.50	ug/l								
2,2-Dichloropropane	ND	0.17	0.50	ug/l								
2-Butanone	ND	1.5	5.0	ug/l								
2-Chlorotoluene	ND	0.15	0.50	ug/l								
2-Hexanone	ND	1.2	5.0	ug/l								
4-Chlorotoluene	ND	0.15	0.50	ug/l								
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l								
Acetone	ND	3.1	5.0	ug/l								
Acrylonitrile	ND	1.5	2.0	ug/l								
Benzene	ND	0.15	0.50	ug/l								
Bromobenzene	ND	0.15	0.50	ug/l								
Bromochloromethane	ND	0.15	0.50	ug/l								
Bromodichloromethane	ND	0.24	0.50	ug/l								
Bromoform	ND	0.38	0.50	ug/l								
Bromomethane	ND	0.27	0.50	ug/l								
Carbon Disulfide	ND	0.25	0.50	ug/l								
Carbon tetrachloride	ND	0.27	0.50	ug/l								
Chlorobenzene	ND	0.15	0.50	ug/l								
Chloroethane	ND	0.17	0.50	ug/l								
Chloroform	ND	0.27	0.50	ug/l								
Chloromethane	ND	0.23	0.50	ug/l								
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l								
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l								
Dibromochloromethane	ND	0.20	0.50	ug/l								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
Blank (W311896-BLK1)						Prepared & Analyzed: 09/24/23					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND	0.50	0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	49.5			ug/l	50.0		99	70-130			
4-Bromofluorobenzene	49.2			ug/l	50.0		98	70-130			
LCS (W311896-BS1)						Prepared & Analyzed: 09/24/23					
1,1,1,2-Tetrachloroethane	4.93	0.24	0.50	ug/l	5.00		99	70-130			
1,1,1-Trichloroethane	4.53	0.26	0.50	ug/l	5.00		91	70-130			
1,1,2,2-Tetrachloroethane	5.00	0.20	0.50	ug/l	5.00		100	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
LCS (W311896-B51)					Prepared & Analyzed: 09/24/23						
1,1,2-Trichloroethane	4.73	0.19	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethane	4.96	0.27	0.50	ug/l	5.00		99	70-130			
1,1-Dichloroethene	4.79	0.16	0.50	ug/l	5.00		96	70-130			
1,1-Dichloropropene	4.33	0.14	0.50	ug/l	5.00		87	70-130			
1,2,3-Trichlorobenzene	5.29	0.40	0.50	ug/l	5.00		106	70-130			
1,2,3-Trichloropropane	4.80	0.22	0.50	ug/l	5.00		96	70-130			
1,2,4-Trichlorobenzene	5.05	0.17	0.50	ug/l	5.00		101	70-130			
1,2,4-Trimethylbenzene	5.15	0.20	0.50	ug/l	5.00		103	70-130			
1,2-Dichloroethane	4.58	0.24	0.50	ug/l	5.00		92	70-130			
1,2-Dichloropropane	4.63	0.13	0.50	ug/l	5.00		93	70-130			
1,3,5-Trimethylbenzene	5.32	0.17	0.50	ug/l	5.00		106	70-130			
1,3-Dichloropropane	4.83	0.27	0.50	ug/l	5.00		97	70-130			
2,2-Dichloropropane	4.45	0.17	0.50	ug/l	5.00		89	70-130			
2-Butanone	4.00	1.5	5.0	ug/l	5.00		80	70-130			J
2-Chlorotoluene	5.25	0.15	0.50	ug/l	5.00		105	70-130			
2-Hexanone	4.38	1.2	5.0	ug/l	5.00		88	70-130			J
4-Chlorotoluene	5.16	0.15	0.50	ug/l	5.00		103	70-130			
4-Methyl-2-pentanone	4.46	1.8	5.0	ug/l	5.00		89	70-130			J
Acetone	46.9	3.1	5.0	ug/l	50.0		94	70-130			
Benzene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.91	0.15	0.50	ug/l	5.00		98	70-130			
Bromochloromethane	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromodichloromethane	4.38	0.24	0.50	ug/l	5.00		88	70-130			
Bromoform	4.70	0.38	0.50	ug/l	5.00		94	70-130			
Bromomethane	4.64	0.27	0.50	ug/l	5.00		93	70-130			
Carbon Disulfide	4.71	0.25	0.50	ug/l	5.00		94	70-130			
Carbon tetrachloride	4.34	0.27	0.50	ug/l	5.00		87	70-130			
Chlorobenzene	4.88	0.15	0.50	ug/l	5.00		98	70-130			
Chloroethane	4.57	0.17	0.50	ug/l	5.00		91	70-130			
Chloroform	4.70	0.27	0.50	ug/l	5.00		94	70-130			
Chloromethane	4.68	0.23	0.50	ug/l	5.00		94	70-130			
cis-1,2-Dichloroethene	4.72	0.25	0.50	ug/l	5.00		94	70-130			
cis-1,3-Dichloropropene	4.76	0.30	0.50	ug/l	5.00		95	70-130			
Dibromochloromethane	4.87	0.20	0.50	ug/l	5.00		97	70-130			
Dibromomethane	4.62	0.20	0.50	ug/l	5.00		92	70-130			
Dichlorodifluoromethane (Freon 12)	4.37	0.45	0.50	ug/l	5.00		87	70-130			
Di-isopropyl ether	18.8	1.1	2.0	ug/l	20.0		94	70-130			
Ethyl tert-butyl ether	20.1	1.0	2.0	ug/l	20.0		100	70-130			
Ethylbenzene	4.62	0.21	0.50	ug/l	5.00		92	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
LCS (W311896-BS1)					Prepared & Analyzed: 09/24/23						
Freon 113	4.61	1.5	5.0	ug/l	5.00		92	70-130			J
Hexachlorobutadiene	4.91	0.40	0.50	ug/l	5.00		98	70-130			
Isopropylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130			
m,p-Xylene	4.63	0.33	0.50	ug/l	5.00		93	70-130			
m-Dichlorobenzene	5.21	0.14	0.50	ug/l	5.00		104	70-130			
Methyl tert-butyl ether (MTBE)	19.1	0.94	2.0	ug/l	20.0		96	70-130			
Methylene chloride	4.72	0.30	0.50	ug/l	5.00		94	70-130			
Naphthalene	4.52	0.35	0.50	ug/l	5.00		90	70-130			
n-Butylbenzene	4.94	0.29	0.50	ug/l	5.00		99	70-130			
n-Propylbenzene	5.39	0.18	0.50	ug/l	5.00		108	70-130			
o-Dichlorobenzene	4.95	0.19	0.50	ug/l	5.00		99	70-130			
o-Xylene	4.62	0.20	0.50	ug/l	5.00		92	70-130			
p-Dichlorobenzene	5.17	0.18	0.50	ug/l	5.00		103	70-130			
p-Isopropyltoluene	5.14	0.25	0.50	ug/l	5.00		103	70-130			
sec-Butylbenzene	4.65	0.24	0.50	ug/l	5.00		93	70-130			
Styrene	4.84	0.19	0.50	ug/l	5.00		97	70-130			
Tert-amyl methyl ether	19.8	0.59	2.0	ug/l	20.0		99	70-130			
tert-Butylbenzene	4.64	0.18	0.50	ug/l	5.00		93	70-130			
Tetrachloroethene	4.82	0.18	0.50	ug/l	5.00		96	70-130			
Toluene	5.07	0.29	0.50	ug/l	5.00		101	70-130			
trans-1,2-Dichloroethene	4.78	0.26	0.50	ug/l	5.00		96	70-130			
trans-1,3-Dichloropropene	4.33	0.32	0.50	ug/l	5.00		87	70-130			
Trichloroethene	4.68	0.18	0.50	ug/l	5.00		94	70-130			
Trichlorofluoromethane	4.72	0.18	0.50	ug/l	5.00		94	70-130			
Vinyl chloride	4.54	0.18	0.50	ug/l	5.00		91	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	51.0			ug/l	50.0		102	70-130			
4-Bromofluorobenzene	49.1			ug/l	50.0		98	70-130			
LCS Dup (W311896-BSD1)					Prepared & Analyzed: 09/24/23						
1,1,1,2-Tetrachloroethane	5.17	0.24	0.50	ug/l	5.00		103	70-130	5	30	
1,1,1-Trichloroethane	5.21	0.26	0.50	ug/l	5.00		104	70-130	14	30	
1,1,2,2-Tetrachloroethane	5.13	0.20	0.50	ug/l	5.00		103	70-130	3	30	
1,1,2-Trichloroethane	5.02	0.19	0.50	ug/l	5.00		100	70-130	6	30	
1,1-Dichloroethane	5.08	0.27	0.50	ug/l	5.00		102	70-130	2	30	
1,1-Dichloroethene	5.19	0.16	0.50	ug/l	5.00		104	70-130	8	30	
1,1-Dichloropropene	5.06	0.14	0.50	ug/l	5.00		101	70-130	16	30	
1,2,3-Trichlorobenzene	5.44	0.40	0.50	ug/l	5.00		109	70-130	3	30	
1,2,3-Trichloropropane	5.16	0.22	0.50	ug/l	5.00		103	70-130	7	30	
1,2,4-Trichlorobenzene	5.19	0.17	0.50	ug/l	5.00		104	70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
LCS Dup (W311896-BSD1)					Prepared & Analyzed: 09/24/23						
1,2,4-Trimethylbenzene	5.43	0.20	0.50	ug/l	5.00		109	70-130	5	30	
1,2-Dichloroethane	4.88	0.24	0.50	ug/l	5.00		98	70-130	6	30	
1,2-Dichloropropane	4.95	0.13	0.50	ug/l	5.00		99	70-130	7	30	
1,3,5-Trimethylbenzene	5.82	0.17	0.50	ug/l	5.00		116	70-130	9	30	
1,3-Dichloropropane	5.20	0.27	0.50	ug/l	5.00		104	70-130	7	30	
2,2-Dichloropropane	5.12	0.17	0.50	ug/l	5.00		102	70-130	14	30	
2-Butanone	4.75	1.5	5.0	ug/l	5.00		95	70-130	17	30	J
2-Chlorotoluene	5.59	0.15	0.50	ug/l	5.00		112	70-130	6	30	
2-Hexanone	4.70	1.2	5.0	ug/l	5.00		94	70-130	7	30	J
4-Chlorotoluene	5.55	0.15	0.50	ug/l	5.00		111	70-130	7	30	
4-Methyl-2-pentanone	4.75	1.8	5.0	ug/l	5.00		95	70-130	6	30	J
Acetone	49.6	3.1	5.0	ug/l	50.0		99	70-130	6	30	
Benzene	5.05	0.15	0.50	ug/l	5.00		101	70-130	8	30	
Bromobenzene	5.17	0.15	0.50	ug/l	5.00		103	70-130	5	30	
Bromochloromethane	5.16	0.15	0.50	ug/l	5.00		103	70-130	6	30	
Bromodichloromethane	4.71	0.24	0.50	ug/l	5.00		94	70-130	7	30	
Bromoform	4.96	0.38	0.50	ug/l	5.00		99	70-130	5	30	
Bromomethane	5.03	0.27	0.50	ug/l	5.00		101	70-130	8	30	
Carbon Disulfide	5.05	0.25	0.50	ug/l	5.00		101	70-130	7	30	
Carbon tetrachloride	5.03	0.27	0.50	ug/l	5.00		101	70-130	15	30	
Chlorobenzene	5.14	0.15	0.50	ug/l	5.00		103	70-130	5	30	
Chloroethane	5.10	0.17	0.50	ug/l	5.00		102	70-130	11	30	
Chloroform	5.02	0.27	0.50	ug/l	5.00		100	70-130	7	30	
Chloromethane	4.96	0.23	0.50	ug/l	5.00		99	70-130	6	30	
cis-1,2-Dichloroethene	5.13	0.25	0.50	ug/l	5.00		103	70-130	8	30	
cis-1,3-Dichloropropene	5.04	0.30	0.50	ug/l	5.00		101	70-130	6	30	
Dibromochloromethane	4.98	0.20	0.50	ug/l	5.00		100	70-130	2	30	
Dibromomethane	4.87	0.20	0.50	ug/l	5.00		97	70-130	5	30	
Dichlorodifluoromethane (Freon 12)	4.88	0.45	0.50	ug/l	5.00		98	70-130	11	30	
Di-isopropyl ether	20.6	1.1	2.0	ug/l	20.0		103	70-130	9	30	
Ethyl tert-butyl ether	22.1	1.0	2.0	ug/l	20.0		111	70-130	10	30	
Ethylbenzene	5.03	0.21	0.50	ug/l	5.00		101	70-130	9	30	
Freon 113	5.31	1.5	5.0	ug/l	5.00		106	70-130	14	30	
Hexachlorobutadiene	5.25	0.40	0.50	ug/l	5.00		105	70-130	7	30	
Isopropylbenzene	4.99	0.18	0.50	ug/l	5.00		100	70-130	9	30	
m,p-Xylene	5.05	0.33	0.50	ug/l	5.00		101	70-130	9	30	
m-Dichlorobenzene	5.36	0.14	0.50	ug/l	5.00		107	70-130	3	30	
Methyl tert-butyl ether (MTBE)	20.9	0.94	2.0	ug/l	20.0		105	70-130	9	30	
Methylene chloride	5.03	0.30	0.50	ug/l	5.00		101	70-130	6	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
11/08/2023 17:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W311896 - EPA 524.2 (Continued)											
LCS Dup (W311896-BSD1)											
Prepared & Analyzed: 09/24/23											
Naphthalene	4.66	0.35	0.50	ug/l	5.00		93	70-130	3	30	
n-Butylbenzene	5.36	0.29	0.50	ug/l	5.00		107	70-130	8	30	
n-Propylbenzene	5.90	0.18	0.50	ug/l	5.00		118	70-130	9	30	
o-Dichlorobenzene	5.13	0.19	0.50	ug/l	5.00		103	70-130	4	30	
o-Xylene	4.98	0.20	0.50	ug/l	5.00		100	70-130	8	30	
p-Dichlorobenzene	5.41	0.18	0.50	ug/l	5.00		108	70-130	5	30	
p-Isopropyltoluene	5.53	0.25	0.50	ug/l	5.00		111	70-130	7	30	
sec-Butylbenzene	5.08	0.24	0.50	ug/l	5.00		102	70-130	9	30	
Styrene	5.12	0.19	0.50	ug/l	5.00		102	70-130	6	30	
Tert-amyl methyl ether	21.7	0.59	2.0	ug/l	20.0		109	70-130	9	30	
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101	70-130	9	30	
Tetrachloroethene	5.37	0.18	0.50	ug/l	5.00		107	70-130	11	30	
Toluene	5.49	0.29	0.50	ug/l	5.00		110	70-130	8	30	
trans-1,2-Dichloroethene	5.28	0.26	0.50	ug/l	5.00		106	70-130	10	30	
trans-1,3-Dichloropropene	4.59	0.32	0.50	ug/l	5.00		92	70-130	6	30	
Trichloroethene	5.18	0.18	0.50	ug/l	5.00		104	70-130	10	30	
Trichlorofluoromethane	5.46	0.18	0.50	ug/l	5.00		109	70-130	14	30	
Vinyl chloride	5.22	0.18	0.50	ug/l	5.00		104	70-130	14	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.2			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	52.4			ug/l	50.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 11/08/2023 17:35

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Sample Receipt Checklist

Weck WKO: **3122107** Date/Time Received: **09/22/23 14:25**
 WKO Logged by: **Jaime Gomez** # of Samples: **01**
 Samples Checked by: **Jaime Gomez** Delivered by: **Client**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature	20°C			
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot# 3082366
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 012X310
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: **09/22/23**

Sample Receipt Checklist



Week WKO: 3122107

WKO Logged by: Jaime Gomez

Samples Checked by: Jaime Gomez

Date/Time Received: 09/22/23 14:25

of Samples: 01

Delivered by: Client

Task Yes No N/A Comments

COC
 COC present at receipt? Yes No N/A
 COC properly completed? Yes No N/A
 COC matches sample labels? Yes No N/A
 Project Manager notified about COC discrepancy? Yes No N/A

Receipt Information
 Sample Temperature Yes No N/A
 Samples received on ice? Yes No N/A
 Ice Type (Blue/Wet) Yes No N/A
 All samples intact? Yes No N/A
 Samples in proper containers? Yes No N/A
 Sufficient sample volume? Yes No N/A
 Samples intact? Yes No N/A
 Received within holding time? Yes No N/A
 Project Manager notified about receipt info? Yes No N/A

Sample Preservation Verification?
 VOC Headspace: (No) none, If Yes (see comment) Yes No N/A
 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT
 pH verified upon receipt? Yes No N/A
 Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2; 6710B<2; 608.3 5-9
 Free Chlorine Tested <0.1 (Organics Analyses) Yes No N/A
 O&G pH <2 verified? Yes No N/A
 O&G adjusted for O&G Yes No N/A
 pH adjusted for O&G Yes No N/A
 Project Manager notified about sample preservation? Yes No N/A

PM Comments

Signature: *Jaime Gomez*
 Sample Receipt Checklist Completed by:

Date: 09/22/23

Work Orders: 3I25063

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/08/2023

Received Date: 09/25/2023

Turnaround Time: 5 workdays

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

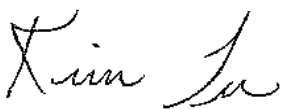
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 9/25/23 with the Chain-of-Custody document. The samples were received in good condition, at 1.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PFOA Field Blank	Steven Shiokari	3I25063-01	Water	09/22/23 16:00	
PT-GAC12-S23	Steven Shiokari	3I25063-02	Water	09/22/23 15:30	
PT-GAC12-S11	Steven Shiokari	3I25063-03	Water	09/22/23 15:30	
PT-GAC13-S23	Steven Shiokari	3I25063-04	Water	09/22/23 16:15	
PT-GAC13-S11	Steven Shiokari	3I25063-05	Water	09/22/23 16:15	
PT-UV12-S10	Steven Shiokari	3I25063-06	Water	09/22/23 15:00	
PT-UV12-S10D	Steven Shiokari	3I25063-07	Water	09/22/23 15:00	
PT-UV13-S10	Steven Shiokari	3I25063-08	Water	09/22/23 16:00	
PT-UV13-S10D	Steven Shiokari	3I25063-09	Water	09/22/23 16:00	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFOA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

Sample: PFOA Field Blank
 3I25063-01 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J0125

Preparation: EPA 537/SPE

Prepared: 10/03/23 08:55

Analyst: jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/06/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/06/23	
ADONA	ND	0.48	1.7	ng/l	1	10/06/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/06/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/06/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/06/23	
PFBS	ND	0.50	1.7	ng/l	1	10/06/23	
PFDA	ND	0.39	1.7	ng/l	1	10/06/23	
PFDoA	ND	0.57	1.7	ng/l	1	10/06/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/06/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/06/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/06/23	
PFNA	ND	0.45	1.7	ng/l	1	10/06/23	
PFOA	ND	0.58	1.7	ng/l	1	10/06/23	
PFOS	ND	0.46	1.7	ng/l	1	10/06/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/06/23	
PFTrDA	ND	0.36	1.7	ng/l	1	10/06/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/06/23	

Surrogate(s)

13C2-PFDA	110%	Conc: 38.1	70-130	10/06/23
13C2-PFHxA	108%	Conc: 37.3	70-130	10/06/23
d5-EtFOSAA	119%	Conc: 165	70-130	10/06/23
HFPO-DA-13C3	101%	Conc: 34.9	70-130	10/06/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC12-S23
3I25063-02 (Water) Sampled: 09/22/23 15:30 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W312016

Preparation: EPA 522/SPE

Prepared: 09/26/23 08:49

Analyst: mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	09/28/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	104%	Conc: 10.3	70-130			09/28/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W312109

Preparation: EPA 5030B

Prepared: 09/26/23 14:50

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	09/26/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J0125

Preparation: EPA 537/SPE

Prepared: 10/03/23 08:55

Analyst: jna

11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/06/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/06/23	
ADONA	ND	0.55	2.0	ng/l	1	10/06/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/06/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/06/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/06/23	
PFBS	ND	0.58	2.0	ng/l	1	10/06/23	
PFDA	ND	0.45	2.0	ng/l	1	10/06/23	
PFDaA	ND	0.66	2.0	ng/l	1	10/06/23	
PFHpA	ND	0.53	2.0	ng/l	1	10/06/23	
PFHxA	ND	0.49	2.0	ng/l	1	10/06/23	
PFHxS	ND	0.59	2.0	ng/l	1	10/06/23	
PFNA	ND	0.52	2.0	ng/l	1	10/06/23	
PFOA	ND	0.67	2.0	ng/l	1	10/06/23	
PFOS	ND	0.53	2.0	ng/l	1	10/06/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/06/23	
PFTTrDA	ND	0.42	2.0	ng/l	1	10/06/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/06/23	

Surrogate(s)

13C2-PFDA	110%	Conc: 41.0	70-130			10/06/23	
13C2-PFHxA	108%	Conc: 40.2	70-130			10/06/23	
d5-EtFOSAA	120%	Conc: 179	70-130			10/06/23	
HFPO-DA-13C3	106%	Conc: 39.5	70-130			10/06/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS14

Batch ID: W311948

Preparation: EPA 5030B

Prepared: 09/25/23 11:43

Analyst: cam

3I25063

Page 4 of 38

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC12-S23
 3I25063-02 (Water) Sampled: 09/22/23 15:30 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B			Prepared: 09/25/23 11:43		Analyst: cam
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/25/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/25/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/25/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	09/25/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/25/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Acetone	ND	3.1	5.0	ug/l	1	09/25/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	ND	0.27	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC12-S23
3I25063-02 (Water) Sampled: 09/22/23 15:30 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
Chloromethane	0.83	0.23	0.50	ug/l	1	09/25/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	ND		0.50	ug/l	1	09/25/23	
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	09/25/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC12-S23
 3I25063-02 (Water) Sampled: 09/22/23 15:30 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	100%	Conc: 50.1	70-130			09/25/23	
4-Bromofluorobenzene	100%	Conc: 50.1	70-130			09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC12-S11
3I25063-03 (Water) Sampled: 09/22/23 15:30 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W312016 **Prepared:** 09/26/23 08:49
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	09/28/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	94%	Conc: 9.21	70-130			09/28/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W312109 **Prepared:** 09/26/23 14:50
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	09/26/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0125 **Prepared:** 10/03/23 08:55
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/06/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/06/23	
ADONA	ND	0.55	2.0	ng/l	1	10/06/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/06/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/06/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/06/23	
PFBS	ND	0.58	2.0	ng/l	1	10/06/23	
PFDA	ND	0.45	2.0	ng/l	1	10/06/23	
PFDaA	ND	0.66	2.0	ng/l	1	10/06/23	
PFHpA	ND	0.53	2.0	ng/l	1	10/06/23	
PFHxA	ND	0.49	2.0	ng/l	1	10/06/23	
PFHxS	ND	0.59	2.0	ng/l	1	10/06/23	
PFNA	ND	0.52	2.0	ng/l	1	10/06/23	
PFOA	ND	0.67	2.0	ng/l	1	10/06/23	
PFOS	ND	0.53	2.0	ng/l	1	10/06/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/06/23	
PFTTrDA	ND	0.42	2.0	ng/l	1	10/06/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/06/23	
<i>Surrogate(s)</i>							
13C2-PFDA	109%	Conc: 43.1	70-130			10/06/23	
13C2-PFHxA	109%	Conc: 42.9	70-130			10/06/23	
d5-EtFOSAA	118%	Conc: 186	70-130			10/06/23	
HFPO-DA-13C3	109%	Conc: 42.8	70-130			10/06/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS14
Batch ID: W311948 **Prepared:** 09/25/23 11:43
Preparation: EPA 5030B **Analyst:** cam

3I25063

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC12-S11
3I25063-03 (Water) Sampled: 09/22/23 15:30 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W311948

Preparation: EPA 5030B

Prepared: 09/25/23 11:43

Analyst: cam

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/25/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/25/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/25/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	09/25/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/25/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Acetone	ND	3.1	5.0	ug/l	1	09/25/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	ND	0.27	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC12-S11
3I25063-03 (Water) Sampled: 09/22/23 15:30 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B			Prepared: 09/25/23 11:43		Analyst: cam
Chloromethane	0.55	0.23	0.50	ug/l	1	09/25/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	ND		0.50	ug/l	1	09/25/23	
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	09/25/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC12-S11
 3I25063-03 (Water) Sampled: 09/22/23 15:30 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	101%	Conc: 50.6	70-130			09/25/23	
4-Bromofluorobenzene	101%	Conc: 50.5	70-130			09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC13-S23
3I25063-04 (Water) Sampled: 09/22/23 16:15 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W312016 **Prepared:** 09/26/23 08:49
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	09/28/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 9.44	70-130			09/28/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W312109 **Prepared:** 09/26/23 14:50
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	09/26/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0125 **Prepared:** 10/03/23 08:55
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/06/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/06/23	
ADONA	ND	0.55	2.0	ng/l	1	10/06/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/06/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/06/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/06/23	
PFBS	ND	0.58	2.0	ng/l	1	10/06/23	
PFDA	ND	0.45	2.0	ng/l	1	10/06/23	
PFDaA	ND	0.66	2.0	ng/l	1	10/06/23	
PFHpA	ND	0.53	2.0	ng/l	1	10/06/23	
PFHxA	ND	0.49	2.0	ng/l	1	10/06/23	
PFHxS	ND	0.59	2.0	ng/l	1	10/06/23	
PFNA	ND	0.52	2.0	ng/l	1	10/06/23	
PFOA	ND	0.67	2.0	ng/l	1	10/06/23	
PFOS	ND	0.53	2.0	ng/l	1	10/06/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/06/23	
PFTTrDA	ND	0.42	2.0	ng/l	1	10/06/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/06/23	
<i>Surrogate(s)</i>							
13C2-PFDA	114%	Conc: 43.4	70-130			10/06/23	
13C2-PFHxA	112%	Conc: 42.7	70-130			10/06/23	
d5-EtFOSAA	115%	Conc: 175	70-130			10/06/23	
HFPO-DA-13C3	111%	Conc: 42.1	70-130			10/06/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS14
Batch ID: W311948 **Prepared:** 09/25/23 11:43
Preparation: EPA 5030B **Analyst:** cam

3I25063

Page 12 of 38

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC13-S23
3I25063-04 (Water) Sampled: 09/22/23 16:15 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/25/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/25/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/25/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	09/25/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/25/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Acetone	ND	3.1	5.0	ug/l	1	09/25/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	ND	0.27	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC13-S23
3I25063-04 (Water) Sampled: 09/22/23 16:15 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
Chloromethane	0.54	0.23	0.50	ug/l	1	09/25/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	ND		0.50	ug/l	1	09/25/23	
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	09/25/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC13-S23
 3I25063-04 (Water) Sampled: 09/22/23 16:15 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W311948

Preparation: EPA 5030B

Prepared: 09/25/23 11:43

Analyst: cam

Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	101%	Conc: 50.6	70-130			09/25/23	
4-Bromofluorobenzene	101%	Conc: 50.5	70-130			09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC13-S11
3I25063-05 (Water) Sampled: 09/22/23 16:15 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W312016 **Prepared:** 09/26/23 08:49
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	09/28/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	104%	Conc: 10.2	70-130			09/28/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W312109 **Prepared:** 09/26/23 14:50
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	09/26/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0125 **Prepared:** 10/03/23 08:55
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.51	1.8	ng/l	1	10/06/23	
9CI-PF3ONS	ND	0.48	1.8	ng/l	1	10/06/23	
ADONA	ND	0.50	1.8	ng/l	1	10/06/23	
EtFOSAA	ND	0.44	1.8	ng/l	1	10/06/23	
HFPO-DA	ND	0.79	1.8	ng/l	1	10/06/23	
MeFOSAA	ND	0.52	1.8	ng/l	1	10/06/23	
PFBS	ND	0.52	1.8	ng/l	1	10/06/23	
PFDA	ND	0.41	1.8	ng/l	1	10/06/23	
PFDaA	ND	0.60	1.8	ng/l	1	10/06/23	
PFHpA	ND	0.49	1.8	ng/l	1	10/06/23	
PFHxA	0.51	0.44	1.8	ng/l	1	10/06/23	J
PFHxS	0.65	0.54	1.8	ng/l	1	10/06/23	J
PFNA	ND	0.47	1.8	ng/l	1	10/06/23	
PFOA	ND	0.61	1.8	ng/l	1	10/06/23	
PFOS	ND	0.48	1.8	ng/l	1	10/06/23	
PFTeDA	ND	0.41	1.8	ng/l	1	10/06/23	
PFTTrDA	ND	0.38	1.8	ng/l	1	10/06/23	
PFUnA	ND	0.43	1.8	ng/l	1	10/06/23	
<i>Surrogate(s)</i>							
13C2-PFDA	145%	Conc: 52.7	70-130			10/06/23	S-04
13C2-PFHxA	142%	Conc: 51.7	70-130			10/06/23	S-04
d5-EtFOSAA	163%	Conc: 237	70-130			10/06/23	S-04
HFPO-DA-13C3	135%	Conc: 49.1	70-130			10/06/23	S-04

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS14
Batch ID: W311948 **Prepared:** 09/25/23 11:43
Preparation: EPA 5030B **Analyst:** cam

3I25063

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC13-S11
3I25063-05 (Water) Sampled: 09/22/23 16:15 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43			Analyst: cam
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/25/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/25/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/25/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	09/25/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/25/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Acetone	ND	3.1	5.0	ug/l	1	09/25/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	ND	0.27	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC13-S11
3I25063-05 (Water) Sampled: 09/22/23 16:15 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
Chloromethane	0.30	0.23	0.50	ug/l	1	09/25/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	0.044		0.50	ug/l	1	09/25/23	J
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	09/25/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC13-S11
 3I25063-05 (Water) Sampled: 09/22/23 16:15 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	100%	Conc: 49.9	70-130			09/25/23	
4-Bromofluorobenzene	100%	Conc: 49.9	70-130			09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV12-S10
3I25063-06 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W312016		Preparation: EPA 522/SPE		Prepared: 09/26/23 08:49		Analyst: mld	
1,4-Dioxane	0.052	0.028	0.070	ug/l	1	09/28/23	J
Surrogate(s)							
1,4-Dioxane-d8	97%	Conc: 10.0	70-130			09/28/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W312109		Preparation: EPA 5030B		Prepared: 09/26/23 14:50		Analyst: ADM	
1,2,3-Trichloropropane	0.019	0.0012	0.0050	ug/l	1	09/26/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J0125		Preparation: EPA 537/SPE		Prepared: 10/03/23 08:55		Analyst: jna	
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/06/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/06/23	
ADONA	ND	0.55	2.0	ng/l	1	10/06/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/06/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/06/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/06/23	
PFBS	1.8	0.58	2.0	ng/l	1	10/06/23	J
PFDA	ND	0.45	2.0	ng/l	1	10/06/23	
PFDoA	ND	0.66	2.0	ng/l	1	10/06/23	
PFHpA	0.61	0.53	2.0	ng/l	1	10/06/23	J
PFHxA	2.2	0.49	2.0	ng/l	1	10/06/23	
PFHxS	1.4	0.59	2.0	ng/l	1	10/06/23	J
PFNA	ND	0.52	2.0	ng/l	1	10/06/23	
PFOA	0.75	0.67	2.0	ng/l	1	10/06/23	J
PFOS	ND	0.53	2.0	ng/l	1	10/06/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/06/23	
PFTTrDA	ND	0.42	2.0	ng/l	1	10/06/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/06/23	
Surrogate(s)							
13C2-PFDA	114%	Conc: 43.6	70-130			10/06/23	
13C2-PFHxA	110%	Conc: 41.8	70-130			10/06/23	
d5-EtFOSAA	123%	Conc: 188	70-130			10/06/23	
HFPO-DA-13C3	108%	Conc: 41.1	70-130			10/06/23	

Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
3I25063							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV12-S10
3I25063-06 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W311948

Preparation: EPA 5030B

Prepared: 09/25/23 11:43

Analyst: cam

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/25/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/25/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/25/23	
1,1-Dichloroethane	0.68	0.27	0.50	ug/l	1	09/25/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/25/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Acetone	3.6	3.1	5.0	ug/l	1	09/25/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	1.2	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	6.7	0.27	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV12-S10
3I25063-06 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W311948

Preparation: EPA 5030B

Prepared: 09/25/23 11:43

Analyst: cam

Chloromethane	0.48	0.23	0.50	ug/l	1	09/25/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	6.7		0.50	ug/l	1	09/25/23	
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	0.39	0.18	0.50	ug/l	1	09/25/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV12-S10
 3I25063-06 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS14

Batch ID: W311948 **Preparation:** EPA 5030B **Prepared:** 09/25/23 11:43 **Analyst:** cam

Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	101%	Conc: 50.7	70-130			09/25/23	
------------------------	------	------------	--------	--	--	----------	--

4-Bromofluorobenzene	101%	Conc: 50.6	70-130			09/25/23	
----------------------	------	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV12-S10D
 3I25063-07 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W312016 **Preparation:** EPA 522/SPE **Prepared:** 09/26/23 08:49 **Analyst:** mld

1,4-Dioxane	0.060	0.028	0.070	ug/l	1	09/28/23	J
-------------	-------	-------	-------	------	---	----------	---

Surrogate(s)

1,4-Dioxane-d8	100%	Conc: 9.60	70-130			09/28/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV13-S10
3I25063-08 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 Instr: GCMS20
 Batch ID: W312016 Preparation: EPA 522/SPE Prepared: 09/26/23 08:49 Analyst: mld
1,4-Dioxane **0.061** 0.028 0.070 ug/l 1 09/28/23 J
 Surrogate(s)
 1,4-Dioxane-d8 99% Conc: 9.72 70-130 09/28/23

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP Instr: GCMS12
 Batch ID: W312109 Preparation: EPA 5030B Prepared: 09/26/23 14:50 Analyst: ADM
1,2,3-Trichloropropane **0.019** 0.0012 0.0050 ug/l 1 09/26/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 Instr: LCMS06
 Batch ID: W3J0125 Preparation: EPA 537/SPE Prepared: 10/03/23 08:55 Analyst: jna

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/06/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/06/23	
ADONA	ND	0.49	1.8	ng/l	1	10/06/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/06/23	
HFPO-DA	ND	0.78	1.8	ng/l	1	10/06/23	
MeFOSAA	ND	0.52	1.8	ng/l	1	10/06/23	
PFBS	1.8	0.52	1.8	ng/l	1	10/06/23	
PFDA	ND	0.41	1.8	ng/l	1	10/06/23	
PFDoA	ND	0.59	1.8	ng/l	1	10/06/23	
PFHpA	0.65	0.48	1.8	ng/l	1	10/06/23	J
PFHxA	2.2	0.44	1.8	ng/l	1	10/06/23	
PFHxS	1.4	0.53	1.8	ng/l	1	10/06/23	J
PFNA	ND	0.47	1.8	ng/l	1	10/06/23	
PFOA	0.77	0.60	1.8	ng/l	1	10/06/23	J
PFOS	ND	0.48	1.8	ng/l	1	10/06/23	
PFTeDA	ND	0.41	1.8	ng/l	1	10/06/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/06/23	
PFUnA	ND	0.43	1.8	ng/l	1	10/06/23	

Surrogate(s)

13C2-PFDA	113%	Conc: 40.6	70-130	10/06/23
13C2-PFHxA	110%	Conc: 39.4	70-130	10/06/23
d5-EtFOSAA	128%	Conc: 183	70-130	10/06/23
HFPO-DA-13C3	107%	Conc: 38.5	70-130	10/06/23

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 Instr: GCMS14
 Batch ID: W311948 Preparation: EPA 5030B Prepared: 09/25/23 11:43 Analyst: cam

3I25063

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV13-S10
3I25063-08 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43			Analyst: cam
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/25/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/25/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/25/23	
1,1-Dichloroethane	0.69	0.27	0.50	ug/l	1	09/25/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/25/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/25/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/25/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	09/25/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/25/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/25/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/25/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/25/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/25/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/25/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/25/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/25/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/25/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/25/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/25/23	
Acetone	3.3	3.1	5.0	ug/l	1	09/25/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	09/25/23	
Benzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/25/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/25/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/25/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/25/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	09/25/23	
Carbon tetrachloride	1.3	0.27	0.50	ug/l	1	09/25/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/25/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/25/23	
Chloroform	6.5	0.27	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV13-S10
3I25063-08 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
Chloromethane	ND	0.23	0.50	ug/l	1	09/25/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/25/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/25/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	09/25/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/25/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/25/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/25/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/25/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/25/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/25/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/25/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/25/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/25/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/25/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/25/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/25/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/25/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/25/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/25/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/25/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/25/23	
Styrene	ND	0.19	0.50	ug/l	1	09/25/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/25/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/25/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
THMs, Total	6.5		0.50	ug/l	1	09/25/23	
Toluene	ND	0.29	0.50	ug/l	1	09/25/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/25/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/25/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/25/23	
Trichlorofluoromethane	0.39	0.18	0.50	ug/l	1	09/25/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/25/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV13-S10
3I25063-08 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS14

Batch ID: W311948 **Preparation:** EPA 5030B **Prepared:** 09/25/23 11:43 **Analyst:** cam

Xylenes, Total	ND	0.33	0.50	ug/l	1	09/25/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	101%	Conc: 50.5	70-130			09/25/23	
------------------------	------	------------	--------	--	--	----------	--

4-Bromofluorobenzene	101%	Conc: 50.4	70-130			09/25/23	
----------------------	------	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV13-S10D
3I25063-09 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W312016 **Preparation:** EPA 522/SPE **Prepared:** 09/26/23 08:49 **Analyst:** mld

1,4-Dioxane	0.049	0.028	0.070	ug/l	1	09/28/23	J
-------------	-------	-------	-------	------	---	----------	---

Surrogate(s)

1,4-Dioxane-d8	91%	Conc: 9.08	70-130			09/28/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W312016 - EPA 522											
Blank (W312016-BLK1)					Prepared: 09/26/23 Analyzed: 09/28/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.19			ug/l	10.0		92	70-130			
Blank (W312016-BLK2)					Prepared: 09/26/23 Analyzed: 10/01/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							QC-2
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.74			ug/l	10.0		97	70-130			QC-2
LCS (W312016-BS1)					Prepared: 09/26/23 Analyzed: 09/28/23						
1,4-Dioxane	1.69	0.028	0.070	ug/l	2.00		85	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.40			ug/l	10.0		94	70-130			
LCS (W312016-BS2)					Prepared: 09/26/23 Analyzed: 10/01/23						
1,4-Dioxane	1.77	0.028	0.070	ug/l	2.00		89	70-130			QC-2
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.2			ug/l	10.0		102	70-130			QC-2
LCS Dup (W312016-BSD1)					Prepared: 09/26/23 Analyzed: 09/28/23						
1,4-Dioxane	1.78	0.028	0.070	ug/l	2.00		89	70-130	5	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.75			ug/l	10.0		98	70-130			
LCS Dup (W312016-BSD2)					Prepared: 09/26/23 Analyzed: 10/01/23						
1,4-Dioxane	1.95	0.028	0.070	ug/l	2.00		98	70-130	10	30	QC-2
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.4			ug/l	10.0		104	70-130			QC-2

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W312109 - SRL 524M-TCP											
Blank (W312109-BLK1)					Prepared & Analyzed: 09/26/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W312109-BS1)					Prepared & Analyzed: 09/26/23						
1,2,3-Trichloropropane	0.0197	0.0012	0.0050	ug/l	0.0200		98	80-120			
LCS Dup (W312109-BSD1)					Prepared & Analyzed: 09/26/23						
1,2,3-Trichloropropane	0.0210	0.0012	0.0050	ug/l	0.0200		105	80-120	7	20	
Duplicate (W312109-DUP1)					Prepared & Analyzed: 09/26/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0125 - EPA 537.1											
Blank (W3J0125-BLK1)						Prepared: 10/03/23 Analyzed: 10/06/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	42.2			ng/l	40.0		106	70-130			
13C2-PFHxA	44.0			ng/l	40.0		110	70-130			
d5-EtFOSAA	192			ng/l	160		120	70-130			
HFPO-DA-13C3	42.0			ng/l	40.0		105	70-130			
LCS (W3J0125-BS1)						Prepared: 10/03/23 Analyzed: 10/06/23					
11CI-PF3OUdS	83.6	0.56	2.0	ng/l	80.0		105	70-130			
9CI-PF3ONS	86.9	0.53	2.0	ng/l	80.0		109	70-130			
ADONA	86.2	0.55	2.0	ng/l	80.0		108	70-130			
EtFOSAA	89.3	0.48	2.0	ng/l	80.0		112	70-130			
HFPO-DA	83.7	0.87	2.0	ng/l	80.0		105	70-130			
MeFOSAA	88.2	0.58	2.0	ng/l	80.0		110	70-130			
PFBS	89.1	0.58	2.0	ng/l	80.0		111	70-130			
PFDA	83.1	0.45	2.0	ng/l	80.0		104	70-130			
PFDoA	87.1	0.66	2.0	ng/l	80.0		109	70-130			
PFHpA	87.1	0.53	2.0	ng/l	80.0		109	70-130			
PFHxA	86.4	0.49	2.0	ng/l	80.0		108	70-130			
PFHxS	88.8	0.59	2.0	ng/l	80.0		111	70-130			
PFNA	88.6	0.52	2.0	ng/l	80.0		111	70-130			
PFOA	91.7	0.67	2.0	ng/l	80.0		115	70-130			
PFOS	87.7	0.53	2.0	ng/l	80.0		110	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0125 - EPA 537.1 (Continued)											
LCS (W3J0125-BS1)						Prepared: 10/03/23 Analyzed: 10/06/23					
PFTeDA	84.4	0.45	2.0	ng/l	80.0		106	70-130			
PFTTrDA	81.3	0.42	2.0	ng/l	80.0		102	70-130			
PFUnA	85.8	0.48	2.0	ng/l	80.0		107	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	41.8			ng/l	40.0		104	70-130			
13C2-PFHxA	43.7			ng/l	40.0		109	70-130			
d5-EtFOSAA	191			ng/l	160		119	70-130			
HFPO-DA-13C3	42.8			ng/l	40.0		107	70-130			
LCS Dup (W3J0125-BS1)						Prepared: 10/03/23 Analyzed: 10/06/23					
11CI-PF3OUdS	85.0	0.56	2.0	ng/l	80.0		106	70-130	2	30	
9CI-PF3ONS	85.1	0.53	2.0	ng/l	80.0		106	70-130	2	30	
ADONA	85.6	0.55	2.0	ng/l	80.0		107	70-130	0.8	30	
EtFOSAA	89.5	0.48	2.0	ng/l	80.0		112	70-130	0.2	30	
HFPO-DA	82.7	0.87	2.0	ng/l	80.0		103	70-130	1	30	
MeFOSAA	86.1	0.58	2.0	ng/l	80.0		108	70-130	2	30	
PFBS	87.1	0.58	2.0	ng/l	80.0		109	70-130	2	30	
PFDA	85.5	0.45	2.0	ng/l	80.0		107	70-130	3	30	
PFDoA	89.9	0.66	2.0	ng/l	80.0		112	70-130	3	30	
PFHpA	87.7	0.53	2.0	ng/l	80.0		110	70-130	0.8	30	
PFHxA	85.8	0.49	2.0	ng/l	80.0		107	70-130	0.7	30	
PFHxS	86.9	0.59	2.0	ng/l	80.0		109	70-130	2	30	
PFNA	88.1	0.52	2.0	ng/l	80.0		110	70-130	0.6	30	
PFOA	90.0	0.67	2.0	ng/l	80.0		112	70-130	2	30	
PFOS	87.2	0.53	2.0	ng/l	80.0		109	70-130	0.5	30	
PFTeDA	86.1	0.45	2.0	ng/l	80.0		108	70-130	2	30	
PFTTrDA	85.1	0.42	2.0	ng/l	80.0		106	70-130	5	30	
PFUnA	88.5	0.48	2.0	ng/l	80.0		111	70-130	3	30	
<i>Surrogate(s)</i>											
13C2-PFDA	43.4			ng/l	40.0		109	70-130			
13C2-PFHxA	43.7			ng/l	40.0		109	70-130			
d5-EtFOSAA	191			ng/l	160		119	70-130			
HFPO-DA-13C3	42.4			ng/l	40.0		106	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC		RPD		Qualifier
							Limits	RPD	Limit		
Batch: W311948 - EPA 524.2											
Blank (W311948-BLK1)						Prepared & Analyzed: 09/25/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
Blank (W311948-BLK1)						Prepared & Analyzed: 09/25/23					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	0.0520		0.50	ug/l							J
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	48.4			ug/l	50.0		97	70-130			
4-Bromofluorobenzene	47.9			ug/l	50.0		96	70-130			
LCS (W311948-BS1)						Prepared & Analyzed: 09/25/23					
1,1,1,2-Tetrachloroethane	4.81	0.24	0.50	ug/l	5.00		96	70-130			
1,1,1-Trichloroethane	4.54	0.26	0.50	ug/l	5.00		91	70-130			
1,1,2,2-Tetrachloroethane	4.71	0.20	0.50	ug/l	5.00		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS (W311948-BS1)					Prepared & Analyzed: 09/25/23						
1,1,2-Trichloroethane	4.60	0.19	0.50	ug/l	5.00		92	70-130			
1,1-Dichloroethane	4.53	0.27	0.50	ug/l	5.00		91	70-130			
1,1-Dichloroethene	4.57	0.16	0.50	ug/l	5.00		91	70-130			
1,1-Dichloropropene	4.49	0.14	0.50	ug/l	5.00		90	70-130			
1,2,3-Trichlorobenzene	4.93	0.40	0.50	ug/l	5.00		99	70-130			
1,2,3-Trichloropropane	4.54	0.22	0.50	ug/l	5.00		91	70-130			
1,2,4-Trichlorobenzene	4.70	0.17	0.50	ug/l	5.00		94	70-130			
1,2,4-Trimethylbenzene	5.10	0.20	0.50	ug/l	5.00		102	70-130			
1,2-Dichloroethane	4.43	0.24	0.50	ug/l	5.00		89	70-130			
1,2-Dichloropropane	4.46	0.13	0.50	ug/l	5.00		89	70-130			
1,3,5-Trimethylbenzene	5.39	0.17	0.50	ug/l	5.00		108	70-130			
1,3-Dichloropropane	4.49	0.27	0.50	ug/l	5.00		90	70-130			
2,2-Dichloropropane	4.46	0.17	0.50	ug/l	5.00		89	70-130			
2-Butanone	4.12	1.5	5.0	ug/l	5.00		82	70-130			J
2-Chlorotoluene	5.36	0.15	0.50	ug/l	5.00		107	70-130			
2-Hexanone	4.02	1.2	5.0	ug/l	5.00		80	70-130			J
4-Chlorotoluene	5.30	0.15	0.50	ug/l	5.00		106	70-130			
4-Methyl-2-pentanone	4.23	1.8	5.0	ug/l	5.00		85	70-130			J
Acetone	43.1	3.1	5.0	ug/l	50.0		86	70-130			
Benzene	4.58	0.15	0.50	ug/l	5.00		92	70-130			
Bromobenzene	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromochloromethane	4.56	0.15	0.50	ug/l	5.00		91	70-130			
Bromodichloromethane	4.66	0.24	0.50	ug/l	5.00		93	70-130			
Bromoform	4.45	0.38	0.50	ug/l	5.00		89	70-130			
Bromomethane	4.61	0.27	0.50	ug/l	5.00		92	70-130			
Carbon Disulfide	4.64	0.25	0.50	ug/l	5.00		93	70-130			
Carbon tetrachloride	4.57	0.27	0.50	ug/l	5.00		91	70-130			
Chlorobenzene	4.69	0.15	0.50	ug/l	5.00		94	70-130			
Chloroethane	4.84	0.17	0.50	ug/l	5.00		97	70-130			
Chloroform	4.48	0.27	0.50	ug/l	5.00		90	70-130			
Chloromethane	4.74	0.23	0.50	ug/l	5.00		95	70-130			
cis-1,2-Dichloroethene	4.46	0.25	0.50	ug/l	5.00		89	70-130			
cis-1,3-Dichloropropene	4.37	0.30	0.50	ug/l	5.00		87	70-130			
Dibromochloromethane	4.49	0.20	0.50	ug/l	5.00		90	70-130			
Dibromomethane	4.47	0.20	0.50	ug/l	5.00		89	70-130			
Dichlorodifluoromethane (Freon 12)	4.06	0.45	0.50	ug/l	5.00		81	70-130			
Di-isopropyl ether	17.0	1.1	2.0	ug/l	20.0		85	70-130			
Ethyl tert-butyl ether	16.1	1.0	2.0	ug/l	20.0		80	70-130			
Ethylbenzene	4.62	0.21	0.50	ug/l	5.00		92	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)										
LCS (W311948-BS1)					Prepared & Analyzed: 09/25/23					
Freon 113	4.49	1.5	5.0	ug/l	5.00		90 70-130			J
Hexachlorobutadiene	4.65	0.40	0.50	ug/l	5.00		93 70-130			
Isopropylbenzene	4.57	0.18	0.50	ug/l	5.00		91 70-130			
m,p-Xylene	4.75	0.33	0.50	ug/l	5.00		95 70-130			
m-Dichlorobenzene	5.08	0.14	0.50	ug/l	5.00		102 70-130			
Methyl tert-butyl ether (MTBE)	16.4	0.94	2.0	ug/l	20.0		82 70-130			
Methylene chloride	4.68	0.30	0.50	ug/l	5.00		94 70-130			
Naphthalene	4.06	0.35	0.50	ug/l	5.00		81 70-130			
n-Butylbenzene	4.78	0.29	0.50	ug/l	5.00		96 70-130			
n-Propylbenzene	5.37	0.18	0.50	ug/l	5.00		107 70-130			
o-Dichlorobenzene	4.81	0.19	0.50	ug/l	5.00		96 70-130			
o-Xylene	4.68	0.20	0.50	ug/l	5.00		94 70-130			
p-Dichlorobenzene	5.04	0.18	0.50	ug/l	5.00		101 70-130			
p-Isopropyltoluene	5.03	0.25	0.50	ug/l	5.00		101 70-130			
sec-Butylbenzene	4.53	0.24	0.50	ug/l	5.00		91 70-130			
Styrene	4.81	0.19	0.50	ug/l	5.00		96 70-130			
Tert-amyl methyl ether	16.3	0.59	2.0	ug/l	20.0		81 70-130			
tert-Butylbenzene	4.63	0.18	0.50	ug/l	5.00		93 70-130			
Tetrachloroethene	4.72	0.18	0.50	ug/l	5.00		94 70-130			
Toluene	4.94	0.29	0.50	ug/l	5.00		99 70-130			
trans-1,2-Dichloroethene	4.58	0.26	0.50	ug/l	5.00		92 70-130			
trans-1,3-Dichloropropene	4.17	0.32	0.50	ug/l	5.00		83 70-130			
Trichloroethene	4.75	0.18	0.50	ug/l	5.00		95 70-130			
Trichlorofluoromethane	4.68	0.18	0.50	ug/l	5.00		94 70-130			
Vinyl chloride	4.55	0.18	0.50	ug/l	5.00		91 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	51.4			ug/l	50.0		103 70-130			
4-Bromofluorobenzene	51.0			ug/l	50.0		102 70-130			
LCS Dup (W311948-BSD1)					Prepared & Analyzed: 09/25/23					
1,1,1,2-Tetrachloroethane	5.29	0.24	0.50	ug/l	5.00		106 70-130	10	30	
1,1,1-Trichloroethane	5.27	0.26	0.50	ug/l	5.00		105 70-130	15	30	
1,1,2,2-Tetrachloroethane	5.19	0.20	0.50	ug/l	5.00		104 70-130	10	30	
1,1,2-Trichloroethane	5.06	0.19	0.50	ug/l	5.00		101 70-130	9	30	
1,1-Dichloroethane	5.41	0.27	0.50	ug/l	5.00		108 70-130	18	30	
1,1-Dichloroethene	5.29	0.16	0.50	ug/l	5.00		106 70-130	15	30	
1,1-Dichloropropene	5.07	0.14	0.50	ug/l	5.00		101 70-130	12	30	
1,2,3-Trichlorobenzene	5.62	0.40	0.50	ug/l	5.00		112 70-130	13	30	
1,2,3-Trichloropropane	5.16	0.22	0.50	ug/l	5.00		103 70-130	13	30	
1,2,4-Trichlorobenzene	5.41	0.17	0.50	ug/l	5.00		108 70-130	14	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS Dup (W311948-BSD1)					Prepared & Analyzed: 09/25/23						
1,2,4-Trimethylbenzene	5.67	0.20	0.50	ug/l	5.00		113	70-130	11	30	
1,2-Dichloroethane	5.05	0.24	0.50	ug/l	5.00		101	70-130	13	30	
1,2-Dichloropropane	5.01	0.13	0.50	ug/l	5.00		100	70-130	12	30	
1,3,5-Trimethylbenzene	6.08	0.17	0.50	ug/l	5.00		122	70-130	12	30	
1,3-Dichloropropane	5.16	0.27	0.50	ug/l	5.00		103	70-130	14	30	
2,2-Dichloropropane	5.26	0.17	0.50	ug/l	5.00		105	70-130	16	30	
2-Butanone	4.51	1.5	5.0	ug/l	5.00		90	70-130	9	30	J
2-Chlorotoluene	5.87	0.15	0.50	ug/l	5.00		117	70-130	9	30	
2-Hexanone	4.65	1.2	5.0	ug/l	5.00		93	70-130	15	30	J
4-Chlorotoluene	5.88	0.15	0.50	ug/l	5.00		118	70-130	10	30	
4-Methyl-2-pentanone	4.93	1.8	5.0	ug/l	5.00		99	70-130	15	30	J
Acetone	48.3	3.1	5.0	ug/l	50.0		97	70-130	11	30	
Benzene	5.08	0.15	0.50	ug/l	5.00		102	70-130	10	30	
Bromobenzene	5.40	0.15	0.50	ug/l	5.00		108	70-130	10	30	
Bromochloromethane	5.21	0.15	0.50	ug/l	5.00		104	70-130	13	30	
Bromodichloromethane	4.88	0.24	0.50	ug/l	5.00		98	70-130	5	30	
Bromoform	4.97	0.38	0.50	ug/l	5.00		99	70-130	11	30	
Bromomethane	5.09	0.27	0.50	ug/l	5.00		102	70-130	10	30	
Carbon Disulfide	5.23	0.25	0.50	ug/l	5.00		105	70-130	12	30	
Carbon tetrachloride	5.12	0.27	0.50	ug/l	5.00		102	70-130	11	30	
Chlorobenzene	5.44	0.15	0.50	ug/l	5.00		109	70-130	15	30	
Chloroethane	5.28	0.17	0.50	ug/l	5.00		106	70-130	9	30	
Chloroform	5.21	0.27	0.50	ug/l	5.00		104	70-130	15	30	
Chloromethane	4.95	0.23	0.50	ug/l	5.00		99	70-130	4	30	
cis-1,2-Dichloroethene	4.99	0.25	0.50	ug/l	5.00		100	70-130	11	30	
cis-1,3-Dichloropropene	5.06	0.30	0.50	ug/l	5.00		101	70-130	14	30	
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00		99	70-130	10	30	
Dibromomethane	4.93	0.20	0.50	ug/l	5.00		99	70-130	10	30	
Dichlorodifluoromethane (Freon 12)	4.92	0.45	0.50	ug/l	5.00		98	70-130	19	30	
Di-isopropyl ether	20.7	1.1	2.0	ug/l	20.0		104	70-130	20	30	
Ethyl tert-butyl ether	21.5	1.0	2.0	ug/l	20.0		107	70-130	29	30	
Ethylbenzene	5.16	0.21	0.50	ug/l	5.00		103	70-130	11	30	
Freon 113	5.43	1.5	5.0	ug/l	5.00		109	70-130	19	30	
Hexachlorobutadiene	5.33	0.40	0.50	ug/l	5.00		107	70-130	14	30	
Isopropylbenzene	5.16	0.18	0.50	ug/l	5.00		103	70-130	12	30	
m,p-Xylene	5.20	0.33	0.50	ug/l	5.00		104	70-130	9	30	
m-Dichlorobenzene	5.64	0.14	0.50	ug/l	5.00		113	70-130	11	30	
Methyl tert-butyl ether (MTBE)	20.3	0.94	2.0	ug/l	20.0		101	70-130	21	30	
Methylene chloride	5.13	0.30	0.50	ug/l	5.00		103	70-130	9	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS Dup (W311948-BSD1)											
Prepared & Analyzed: 09/25/23											
Naphthalene	4.75	0.35	0.50	ug/l	5.00		95	70-130	16	30	
n-Butylbenzene	5.49	0.29	0.50	ug/l	5.00		110	70-130	14	30	
n-Propylbenzene	6.05	0.18	0.50	ug/l	5.00		121	70-130	12	30	
o-Dichlorobenzene	5.31	0.19	0.50	ug/l	5.00		106	70-130	10	30	
o-Xylene	5.21	0.20	0.50	ug/l	5.00		104	70-130	11	30	
p-Dichlorobenzene	5.64	0.18	0.50	ug/l	5.00		113	70-130	11	30	
p-Isopropyltoluene	5.64	0.25	0.50	ug/l	5.00		113	70-130	11	30	
sec-Butylbenzene	5.11	0.24	0.50	ug/l	5.00		102	70-130	12	30	
Styrene	5.35	0.19	0.50	ug/l	5.00		107	70-130	10	30	
Tert-amyl methyl ether	20.9	0.59	2.0	ug/l	20.0		104	70-130	25	30	
tert-Butylbenzene	5.19	0.18	0.50	ug/l	5.00		104	70-130	11	30	
Tetrachloroethene	5.37	0.18	0.50	ug/l	5.00		107	70-130	13	30	
Toluene	5.61	0.29	0.50	ug/l	5.00		112	70-130	13	30	
trans-1,2-Dichloroethene	5.45	0.26	0.50	ug/l	5.00		109	70-130	18	30	
trans-1,3-Dichloropropene	4.69	0.32	0.50	ug/l	5.00		94	70-130	12	30	
Trichloroethene	5.25	0.18	0.50	ug/l	5.00		105	70-130	10	30	
Trichlorofluoromethane	5.40	0.18	0.50	ug/l	5.00		108	70-130	14	30	
Vinyl chloride	5.28	0.18	0.50	ug/l	5.00		106	70-130	15	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.4			ug/l	50.0		107	70-130			
4-Bromofluorobenzene	52.9			ug/l	50.0		106	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/08/2023 17:28

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3125003**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150%	
PROJECT MANAGER Chris Kindle		SAMPLER Steven Shiokari						<input type="checkbox"/> 24 Hour Rush 100%	
		Invoice to Rose Ford, Rford@BrwnCald.com						<input type="checkbox"/> 48-72 Hour Rush 75%	
								<input type="checkbox"/> 4 - 5 Day Rush 30%	
								<input type="checkbox"/> Rush Extractions 50%	
								<input type="checkbox"/> 10 - 15 Business Days	
								<input type="checkbox"/> QA/QC Data Package	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA								
	09/22/23	4:00 PM	G	PFOA Field Blank	1				X								
	09/22/23	3:30 PM	G	PT-GAC12-S23	9	X	X	X	X								
	09/22/23	3:30 PM	G	PT-GAC12-S11	9	X	X	X	X								
	09/22/23	4:15 PM	G	PT-GAC13-S23	9	X	X	X	X								
	09/22/23	4:15 PM	G	PT-GAC13-S11	9	X	X	X	X								
	09/22/23	3:00 PM	G	PT-UV12-S10	9	X*	X*	X	X								
	09/22/23	3:00 PM	G	PT-UV12-S10D	2	X*											
	09/22/23	4:00 PM	G	PT-UV13-S10	9	X*	X*	X	X								
	09/22/23	4:00 PM	G	PT-UV13-S10D	2	X*											

Charges will apply for weekends/holidays
Method of Shipment:
COMMENTS

*4-5 Day Rush Samples (UV samples) and Methods (only 522.1 and 524.2). All other's are standard TATs

RELINQUISHED BY <i>Heidi Sauer</i>	DATE / TIME 9-25-23	RECEIVED BY <i>[Signature]</i>	DATE / TIME 9/25/23 12:42	SAMPLE CONDITION: Actual Temperature: 1° <input type="checkbox"/> Recolved On Ice <input type="checkbox"/> Preserved <input type="checkbox"/> Evidence Seals Present <input type="checkbox"/> Container Attacked <input type="checkbox"/> Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.
Page 38 of 39
COC version 04/13/2019



Sample Receipt Checklist

Weck WKO: **3125063**

Date/Time Received: **09/25/23 14:14**

WKO Logged by: **Jaime Gomez**

of Samples: **09**

Samples Checked by: **Jaime Gomez**

Delivered by: **Rosaiba Magana**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?		<input checked="" type="checkbox"/>		9.1 °C
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?				pH paper Lot# 3082366
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		CI Test Strip Lot# 012X310
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amt added

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: **09/25/23**

Work Orders: 3125067

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 10/03/2023

Received Date: 09/25/2023

Turnaround Time: 5 workdays

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

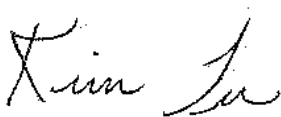
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 9/25/23 with the Chain-of-Custody document. The samples were received in good condition, at 1.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Certificate of Analysis

FINAL REPORT

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GS12-S4	Steven Shiokari	3I25067-01	Water	09/22/23 15:00	
PT-GS12-S8	Steven Shiokari	3I25067-02	Water	09/22/23 15:00	
PT-GS13-S4	Steven Shiokari	3I25067-03	Water	09/22/23 16:00	
PT-GS13-S8	Steven Shiokari	3I25067-04	Water	09/22/23 16:00	
PT-UV12-S9	Steven Shiokari	3I25067-05	Water	09/22/23 15:00	
PT-UV12-S9D	Steven Shiokari	3I25067-06	Water	09/22/23 15:00	
PT-UV13-S9	Steven Shiokari	3I25067-07	Water	09/22/23 16:00	
PT-UV13-S9D	Steven Shiokari	3I25067-08	Water	09/22/23 16:00	
1,4-Dioxane, Field Blank	Steven Shiokari	3I25067-09	Water	09/22/23 15:00	
TCE/PCE Trip Blank	Steven Shiokari	3I25067-10	Water	09/22/23 16:15	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GS12-S4
 3125067-01 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W312449		Preparation: EPA 200.2		Prepared: 09/29/23 09:44		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/02/23	
Iron, Total	0.091	0.025	0.030	mg/l	1	10/02/23	
Manganese, Dissolved	9.2	2.7	5.0	ug/l	1	10/02/23	
Manganese, Total	0.015	0.00083	0.0050	mg/l	1	10/02/23	

Sample Results

Sample: PT-GS12-S8
 3125067-02 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W312449		Preparation: EPA 200.2		Prepared: 09/29/23 09:44		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/02/23	
Iron, Total	ND	0.025	0.030	mg/l	1	10/02/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/02/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/02/23	

Sample Results

Sample: PT-GS13-S4
 3125067-03 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W312449		Preparation: EPA 200.2		Prepared: 09/29/23 09:44		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/02/23	
Iron, Total	0.10	0.025	0.030	mg/l	1	10/02/23	
Manganese, Dissolved	9.5	2.7	5.0	ug/l	1	10/02/23	
Manganese, Total	0.015	0.00083	0.0050	mg/l	1	10/02/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GS13-S8

Sampled: 09/22/23 16:00 by Steven Shiokari

3I25067-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7				Instr: ICP03			
Batch ID: W312449		Preparation: EPA 200.2		Prepared: 09/29/23 09:44		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/02/23	
Iron, Total	ND	0.025	0.030	mg/l	1	10/02/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/02/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/02/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV12-S9

Sampled: 09/22/23 15:00 by Steven Shiokari

3I25067-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B		Prepared: 09/25/23 11:43		Analyst: cam	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/26/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/26/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/26/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/26/23	
1,1-Dichloroethane	1.2	0.27	0.50	ug/l	1	09/26/23	
1,1-Dichloroethene	7.7	0.16	0.50	ug/l	1	09/26/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/26/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/26/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/26/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/26/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/26/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/26/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/26/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/26/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/26/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/26/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/26/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/26/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/26/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/26/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/26/23	
Benzene	ND	0.15	0.50	ug/l	1	09/26/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/26/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/26/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/26/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/26/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/26/23	
Carbon tetrachloride	1.5	0.27	0.50	ug/l	1	09/26/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/26/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/26/23	
Chloroform	8.0	0.27	0.50	ug/l	1	09/26/23	
Chloromethane	0.39	0.23	0.50	ug/l	1	09/26/23	J
cis-1,2-Dichloroethene	2.1	0.25	0.50	ug/l	1	09/26/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/26/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/26/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV12-S9

Sampled: 09/22/23 15:00 by Steven Shiokari

3125067-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W311948

Preparation: EPA 5030B

Prepared: 09/25/23 11:43

Analyst: cam

Dibromomethane	ND	0.20	0.50	ug/l	1	09/26/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/26/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/26/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/26/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/26/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/26/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/26/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/26/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/26/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/26/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/26/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/26/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/26/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/26/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/26/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/26/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/26/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/26/23	
Styrene	ND	0.19	0.50	ug/l	1	09/26/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/26/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
Tetrachloroethene	2.1	0.18	0.50	ug/l	1	09/26/23	
THMs, Total	8.0		0.50	ug/l	1	09/26/23	
Toluene	ND	0.29	0.50	ug/l	1	09/26/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/26/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/26/23	
Trichloroethene	82	0.18	0.50	ug/l	1	09/26/23	
Trichlorofluoromethane	0.47	0.18	0.50	ug/l	1	09/26/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/26/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/26/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	104%	Conc: 52.2	70-130	09/26/23
4-Bromofluorobenzene	103%	Conc: 51.3	70-130	09/26/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV12-S9
3I25067-05 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS14
Batch ID: W311948 **Prepared:** 09/25/23 11:43
Preparation: EPA 5030B **Analyst:** cam
(Continued)

Sample Results

Sample: PT-UV12-S9
3I25067-05RE1 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W312016 **Prepared:** 09/26/23 08:49
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	190	1.4	3.5	ug/l	50	10/01/23	M-06
-------------	-----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	111%	Conc: 11.0	70-130			10/01/23	
----------------	------	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV12-S9D
3I25067-06RE1 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W312016 **Prepared:** 09/26/23 08:49
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	160	1.4	3.5	ug/l	50	10/01/23	M-06
-------------	-----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	88%	Conc: 8.81	70-130			10/01/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV13-S9

Sampled: 09/22/23 16:00 by Steven Shiokari

3I25067-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B			Prepared: 09/25/23 11:43		Analyst: cam
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/26/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/26/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/26/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/26/23	
1,1-Dichloroethane	1.1	0.27	0.50	ug/l	1	09/26/23	
1,1-Dichloroethene	7.0	0.16	0.50	ug/l	1	09/26/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/26/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/26/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/26/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/26/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/26/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/26/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/26/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/26/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/26/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/26/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/26/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/26/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/26/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/26/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/26/23	
Benzene	ND	0.15	0.50	ug/l	1	09/26/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/26/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/26/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/26/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/26/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/26/23	
Carbon tetrachloride	1.4	0.27	0.50	ug/l	1	09/26/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/26/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/26/23	
Chloroform	7.2	0.27	0.50	ug/l	1	09/26/23	
Chloromethane	0.29	0.23	0.50	ug/l	1	09/26/23	J
cis-1,2-Dichloroethene	2.2	0.25	0.50	ug/l	1	09/26/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/26/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/26/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV13-S9

Sampled: 09/22/23 16:00 by Steven Shiokari

3I25067-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B			Prepared: 09/25/23 11:43		Analyst: cam
Dibromomethane	ND	0.20	0.50	ug/l	1	09/26/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/26/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/26/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/26/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/26/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/26/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/26/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/26/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/26/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/26/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/26/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/26/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/26/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/26/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/26/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/26/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/26/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/26/23	
Styrene	ND	0.19	0.50	ug/l	1	09/26/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/26/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
Tetrachloroethene	1.9	0.18	0.50	ug/l	1	09/26/23	
THMs, Total	7.2		0.50	ug/l	1	09/26/23	
Toluene	ND	0.29	0.50	ug/l	1	09/26/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/26/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/26/23	
Trichloroethene	78	0.18	0.50	ug/l	1	09/26/23	
Trichlorofluoromethane	0.43	0.18	0.50	ug/l	1	09/26/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/26/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/26/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	100%	Conc: 50.2	70-130	09/26/23
4-Bromofluorobenzene	99%	Conc: 49.4	70-130	09/26/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV13-S9
3125067-07 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS14
Batch ID: W311948 **Prepared:** 09/25/23 11:43
Preparation: EPA 5030B **Analyst:** cam

Sample Results

(Continued)

Sample: PT-UV13-S9
3125067-07RE1 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W312016 **Prepared:** 09/26/23 08:49
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane **160** 1.4 3.5 ug/l 50 10/01/23 **M-06**

Surrogate(s)
1,4-Dioxane-d8 **96%** *Conc: 9.43* 70-130 10/01/23

Sample Results

(Continued)

Sample: PT-UV13-S9D
3125067-08RE1 (Water) Sampled: 09/22/23 16:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W312016 **Prepared:** 09/26/23 08:49
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane **160** 1.4 3.5 ug/l 50 10/01/23 **M-06**

Surrogate(s)
1,4-Dioxane-d8 **88%** *Conc: 8.81* 70-130 10/01/23

Sample Results

(Continued)

Sample: 1,4-Dioxane, Field Blank
3125067-09 (Water) Sampled: 09/22/23 15:00 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W312016 **Prepared:** 09/26/23 08:49
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane **0.24** 0.028 0.070 ug/l 1 09/28/23

Surrogate(s)
1,4-Dioxane-d8 **97%** *Conc: 9.87* 70-130 09/28/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: TCE/PCE Trip Blank
3I25067-10 (Water)

Sampled: 09/22/23 16:15 by Steven Shiokari

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W311948		Preparation: EPA 5030B			Prepared: 09/25/23 11:43		Analyst: cam
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	09/26/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	09/26/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	09/26/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	09/26/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	09/26/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	09/26/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	09/26/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	09/26/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	09/26/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	09/26/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	09/26/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	09/26/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	09/26/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	09/26/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	09/26/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	09/26/23	
2-Butanone	ND	1.5	5.0	ug/l	1	09/26/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/26/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	09/26/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	09/26/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	09/26/23	
Benzene	ND	0.15	0.50	ug/l	1	09/26/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	09/26/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	09/26/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	09/26/23	
Bromoform	ND	0.38	0.50	ug/l	1	09/26/23	
Bromomethane	ND	0.27	0.50	ug/l	1	09/26/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	09/26/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	09/26/23	
Chloroethane	ND	0.17	0.50	ug/l	1	09/26/23	
Chloroform	ND	0.27	0.50	ug/l	1	09/26/23	
Chloromethane	ND	0.23	0.50	ug/l	1	09/26/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	09/26/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	09/26/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	09/26/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: TCE/PCE Trip Blank
3125067-10 (Water)

Sampled: 09/22/23 16:15 by Steven Shiokari

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W311948

Preparation: EPA 5030B

Prepared: 09/25/23 11:43

Analyst: cam

Dibromomethane	ND	0.20	0.50	ug/l	1	09/26/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	09/26/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	09/26/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	09/26/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	09/26/23	
Freon 113	ND	1.5	5.0	ug/l	1	09/26/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	09/26/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	09/26/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	09/26/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	09/26/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	09/26/23	
Naphthalene	ND	0.35	0.50	ug/l	1	09/26/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	09/26/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	09/26/23	
o-Xylene	ND	0.20	0.50	ug/l	1	09/26/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	09/26/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	09/26/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	09/26/23	
Styrene	ND	0.19	0.50	ug/l	1	09/26/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	09/26/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	09/26/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	09/26/23	
THMs, Total	0.056		0.50	ug/l	1	09/26/23	J
Toluene	ND	0.29	0.50	ug/l	1	09/26/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	09/26/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	09/26/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	09/26/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	09/26/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	09/26/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	09/26/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	102%	Conc: 51.2	70-130			09/26/23	
4-Bromofluorobenzene	102%	Conc: 50.8	70-130			09/26/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: TCE/PCE Trip Blank
 3I25067-10 (Water)

Sampled: 09/22/23 16:15 by Steven Shiokari

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2						Instr: GCMS14	
Batch ID: W311948		Preparation: EPA 5030B				Prepared: 09/25/23 11:43	Analyst: cam

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3I2016 - EPA 522											
Blank (W3I2016-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
Prepared: 09/26/23 Analyzed: 09/28/23											
Surrogate(s)											
1,4-Dioxane-d8	9.19			ug/l	10.0		92	70-130			
Blank (W3I2016-BLK2)											
1,4-Dioxane	ND	0.028	0.070	ug/l							QC-2
Prepared: 09/26/23 Analyzed: 10/01/23											
Surrogate(s)											
1,4-Dioxane-d8	9.74			ug/l	10.0		97	70-130			QC-2
LCS (W3I2016-BS1)											
1,4-Dioxane	1.69	0.028	0.070	ug/l	2.00		85	70-130			
Prepared: 09/26/23 Analyzed: 09/28/23											
Surrogate(s)											
1,4-Dioxane-d8	9.40			ug/l	10.0		94	70-130			
LCS (W3I2016-BS2)											
1,4-Dioxane	1.77	0.028	0.070	ug/l	2.00		89	70-130			QC-2
Prepared: 09/26/23 Analyzed: 10/01/23											
Surrogate(s)											
1,4-Dioxane-d8	10.2			ug/l	10.0		102	70-130			QC-2
LCS Dup (W3I2016-BSD1)											
1,4-Dioxane	1.78	0.028	0.070	ug/l	2.00		89	70-130	5	30	
Prepared: 09/26/23 Analyzed: 09/28/23											
Surrogate(s)											
1,4-Dioxane-d8	9.75			ug/l	10.0		98	70-130			
LCS Dup (W3I2016-BSD2)											
1,4-Dioxane	1.95	0.028	0.070	ug/l	2.00		98	70-130	10	30	QC-2
Prepared: 09/26/23 Analyzed: 10/01/23											
Surrogate(s)											
1,4-Dioxane-d8	10.4			ug/l	10.0		104	70-130			QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/03/2023 15:56

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W312449 - EPA 200.7											
Blank (W312449-BLK1)					Prepared: 09/29/23 Analyzed: 10/02/23						
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.025	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W312449-BS1)					Prepared: 09/29/23 Analyzed: 10/02/23						
Iron, Dissolved	199	5.0	30	ug/l	201		99	85-115			
Iron, Total	0.199	0.025	0.030	mg/l	0.201		99	85-115			
Manganese, Dissolved	193	2.7	5.0	ug/l	201		96	85-115			
Manganese, Total	0.193	0.00083	0.0050	mg/l	0.201		96	85-115			
Matrix Spike (W312449-MS1)					Source: 3125067-01 Prepared: 09/29/23 Analyzed: 10/02/23						
Iron, Total	0.303	0.025	0.030	mg/l	0.201	0.0914	105	70-130			
Manganese, Dissolved	213	2.7	5.0	ug/l	201	9.17	102	70-130			
Manganese, Total	0.213	0.00083	0.0050	mg/l	0.201	0.0151	99	70-130			
Matrix Spike (W312449-MS2)					Source: 3125067-04 Prepared: 09/29/23 Analyzed: 10/02/23						
Iron, Dissolved	206	5.0	30	ug/l	201	ND	103	70-130			
Iron, Total	0.206	0.025	0.030	mg/l	0.201	ND	103	70-130			
Manganese, Dissolved	199	2.7	5.0	ug/l	201	ND	99	70-130			
Manganese, Total	0.199	0.00083	0.0050	mg/l	0.201	ND	99	70-130			
Matrix Spike Dup (W312449-MSD1)					Source: 3125067-01 Prepared: 09/29/23 Analyzed: 10/02/23						
Iron, Total	0.306	0.025	0.030	mg/l	0.201	0.0914	107	70-130	1	30	
Manganese, Dissolved	214	2.7	5.0	ug/l	201	9.17	102	70-130	0.4	30	
Manganese, Total	0.214	0.00083	0.0050	mg/l	0.201	0.0151	99	70-130	0.4	30	
Matrix Spike Dup (W312449-MSD2)					Source: 3125067-04 Prepared: 09/29/23 Analyzed: 10/02/23						
Iron, Dissolved	208	5.0	30	ug/l	201	ND	104	70-130	1	30	
Iron, Total	0.208	0.025	0.030	mg/l	0.201	ND	104	70-130	1	30	
Manganese, Dissolved	200	2.7	5.0	ug/l	201	ND	99	70-130	0.5	30	
Manganese, Total	0.200	0.00083	0.0050	mg/l	0.201	ND	99	70-130	0.5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2											
Blank (W311948-BLK1)											
Prepared & Analyzed: 09/25/23											
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/03/2023 15:56

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
Blank (W311948-BLK1)						Prepared & Analyzed: 09/25/23					
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	0.0520		0.50	ug/l							J
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	48.4			ug/l	50.0		97	70-130			
4-Bromofluorobenzene	47.9			ug/l	50.0		96	70-130			
LCS (W311948-BS1)						Prepared & Analyzed: 09/25/23					
1,1,1,2-Tetrachloroethane	4.81	0.24	0.50	ug/l	5.00		96	70-130			
1,1,1-Trichloroethane	4.54	0.26	0.50	ug/l	5.00		91	70-130			
1,1,2,2-Tetrachloroethane	4.71	0.20	0.50	ug/l	5.00		94	70-130			
1,1,2-Trichloroethane	4.60	0.19	0.50	ug/l	5.00		92	70-130			
1,1-Dichloroethane	4.53	0.27	0.50	ug/l	5.00		91	70-130			
1,1-Dichloroethene	4.57	0.16	0.50	ug/l	5.00		91	70-130			
1,1-Dichloropropene	4.49	0.14	0.50	ug/l	5.00		90	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/03/2023 15:56

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS (W311948-BS1)					Prepared & Analyzed: 09/25/23						
1,2,3-Trichlorobenzene	4.93	0.40	0.50	ug/l	5.00		99	70-130			
1,2,4-Trichlorobenzene	4.70	0.17	0.50	ug/l	5.00		94	70-130			
1,2,4-Trimethylbenzene	5.10	0.20	0.50	ug/l	5.00		102	70-130			
1,2-Dichloroethane	4.43	0.24	0.50	ug/l	5.00		89	70-130			
1,2-Dichloropropane	4.46	0.13	0.50	ug/l	5.00		89	70-130			
1,3,5-Trimethylbenzene	5.39	0.17	0.50	ug/l	5.00		108	70-130			
1,3-Dichloropropane	4.49	0.27	0.50	ug/l	5.00		90	70-130			
2,2-Dichloropropane	4.46	0.17	0.50	ug/l	5.00		89	70-130			
2-Butanone	4.12	1.5	5.0	ug/l	5.00		82	70-130			J
2-Chlorotoluene	5.36	0.15	0.50	ug/l	5.00		107	70-130			
2-Hexanone	4.02	1.2	5.0	ug/l	5.00		80	70-130			J
4-Chlorotoluene	5.30	0.15	0.50	ug/l	5.00		106	70-130			
4-Methyl-2-pentanone	4.23	1.8	5.0	ug/l	5.00		85	70-130			J
Benzene	4.58	0.15	0.50	ug/l	5.00		92	70-130			
Bromobenzene	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromochloromethane	4.56	0.15	0.50	ug/l	5.00		91	70-130			
Bromodichloromethane	4.66	0.24	0.50	ug/l	5.00		93	70-130			
Bromoform	4.45	0.38	0.50	ug/l	5.00		89	70-130			
Bromomethane	4.61	0.27	0.50	ug/l	5.00		92	70-130			
Carbon tetrachloride	4.57	0.27	0.50	ug/l	5.00		91	70-130			
Chlorobenzene	4.69	0.15	0.50	ug/l	5.00		94	70-130			
Chloroethane	4.84	0.17	0.50	ug/l	5.00		97	70-130			
Chloroform	4.48	0.27	0.50	ug/l	5.00		90	70-130			
Chloromethane	4.74	0.23	0.50	ug/l	5.00		95	70-130			
cis-1,2-Dichloroethene	4.46	0.25	0.50	ug/l	5.00		89	70-130			
cis-1,3-Dichloropropene	4.37	0.30	0.50	ug/l	5.00		87	70-130			
Dibromochloromethane	4.49	0.20	0.50	ug/l	5.00		90	70-130			
Dibromomethane	4.47	0.20	0.50	ug/l	5.00		89	70-130			
Dichlorodifluoromethane (Freon 12)	4.06	0.45	0.50	ug/l	5.00		81	70-130			
Di-isopropyl ether	17.0	1.1	2.0	ug/l	20.0		85	70-130			
Ethyl tert-butyl ether	16.1	1.0	2.0	ug/l	20.0		80	70-130			
Ethylbenzene	4.62	0.21	0.50	ug/l	5.00		92	70-130			
Freon 113	4.49	1.5	5.0	ug/l	5.00		90	70-130			J
Hexachlorobutadiene	4.65	0.40	0.50	ug/l	5.00		93	70-130			
Isopropylbenzene	4.57	0.18	0.50	ug/l	5.00		91	70-130			
m,p-Xylene	4.75	0.33	0.50	ug/l	5.00		95	70-130			
m-Dichlorobenzene	5.08	0.14	0.50	ug/l	5.00		102	70-130			
Methyl tert-butyl ether (MTBE)	16.4	0.94	2.0	ug/l	20.0		82	70-130			
Methylene chloride	4.68	0.30	0.50	ug/l	5.00		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/03/2023 15:56

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)										
LCS (W311948-BS1)					Prepared & Analyzed: 09/25/23					
Naphthalene	4.06	0.35	0.50	ug/l	5.00		81 70-130			
n-Butylbenzene	4.78	0.29	0.50	ug/l	5.00		96 70-130			
n-Propylbenzene	5.37	0.18	0.50	ug/l	5.00		107 70-130			
o-Dichlorobenzene	4.81	0.19	0.50	ug/l	5.00		96 70-130			
o-Xylene	4.68	0.20	0.50	ug/l	5.00		94 70-130			
p-Dichlorobenzene	5.04	0.18	0.50	ug/l	5.00		101 70-130			
p-Isopropyltoluene	5.03	0.25	0.50	ug/l	5.00		101 70-130			
sec-Butylbenzene	4.53	0.24	0.50	ug/l	5.00		91 70-130			
Styrene	4.81	0.19	0.50	ug/l	5.00		96 70-130			
Tert-amyl methyl ether	16.3	0.59	2.0	ug/l	20.0		81 70-130			
tert-Butylbenzene	4.63	0.18	0.50	ug/l	5.00		93 70-130			
Tetrachloroethene	4.72	0.18	0.50	ug/l	5.00		94 70-130			
Toluene	4.94	0.29	0.50	ug/l	5.00		99 70-130			
trans-1,2-Dichloroethene	4.58	0.26	0.50	ug/l	5.00		92 70-130			
trans-1,3-Dichloropropene	4.17	0.32	0.50	ug/l	5.00		83 70-130			
Trichloroethene	4.75	0.18	0.50	ug/l	5.00		95 70-130			
Trichlorofluoromethane	4.68	0.18	0.50	ug/l	5.00		94 70-130			
Vinyl chloride	4.55	0.18	0.50	ug/l	5.00		91 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	51.4			ug/l	50.0		103 70-130			
4-Bromofluorobenzene	51.0			ug/l	50.0		102 70-130			
LCS Dup (W311948-BSD1)					Prepared & Analyzed: 09/25/23					
1,1,1,2-Tetrachloroethane	5.29	0.24	0.50	ug/l	5.00		106 70-130	10	30	
1,1,1-Trichloroethane	5.27	0.26	0.50	ug/l	5.00		105 70-130	15	30	
1,1,2,2-Tetrachloroethane	5.19	0.20	0.50	ug/l	5.00		104 70-130	10	30	
1,1,2-Trichloroethane	5.06	0.19	0.50	ug/l	5.00		101 70-130	9	30	
1,1-Dichloroethane	5.41	0.27	0.50	ug/l	5.00		108 70-130	18	30	
1,1-Dichloroethene	5.29	0.16	0.50	ug/l	5.00		106 70-130	15	30	
1,1-Dichloropropene	5.07	0.14	0.50	ug/l	5.00		101 70-130	12	30	
1,2,3-Trichlorobenzene	5.62	0.40	0.50	ug/l	5.00		112 70-130	13	30	
1,2,4-Trichlorobenzene	5.41	0.17	0.50	ug/l	5.00		108 70-130	14	30	
1,2,4-Trimethylbenzene	5.67	0.20	0.50	ug/l	5.00		113 70-130	11	30	
1,2-Dichloroethane	5.05	0.24	0.50	ug/l	5.00		101 70-130	13	30	
1,2-Dichloropropane	5.01	0.13	0.50	ug/l	5.00		100 70-130	12	30	
1,3,5-Trimethylbenzene	6.08	0.17	0.50	ug/l	5.00		122 70-130	12	30	
1,3-Dichloropropane	5.16	0.27	0.50	ug/l	5.00		103 70-130	14	30	
2,2-Dichloropropane	5.26	0.17	0.50	ug/l	5.00		105 70-130	16	30	
2-Butanone	4.51	1.5	5.0	ug/l	5.00		90 70-130	9	30	J
2-Chlorotoluene	5.87	0.15	0.50	ug/l	5.00		117 70-130	9	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/03/2023 15:56

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS Dup (W311948-BSD1)					Prepared & Analyzed: 09/25/23						
2-Hexanone	4.65	1.2	5.0	ug/l	5.00		93	70-130	15	30	J
4-Chlorotoluene	5.88	0.15	0.50	ug/l	5.00		118	70-130	10	30	
4-Methyl-2-pentanone	4.93	1.8	5.0	ug/l	5.00		99	70-130	15	30	J
Benzene	5.08	0.15	0.50	ug/l	5.00		102	70-130	10	30	
Bromobenzene	5.40	0.15	0.50	ug/l	5.00		108	70-130	10	30	
Bromochloromethane	5.21	0.15	0.50	ug/l	5.00		104	70-130	13	30	
Bromodichloromethane	4.88	0.24	0.50	ug/l	5.00		98	70-130	5	30	
Bromoform	4.97	0.38	0.50	ug/l	5.00		99	70-130	11	30	
Bromomethane	5.09	0.27	0.50	ug/l	5.00		102	70-130	10	30	
Carbon tetrachloride	5.12	0.27	0.50	ug/l	5.00		102	70-130	11	30	
Chlorobenzene	5.44	0.15	0.50	ug/l	5.00		109	70-130	15	30	
Chloroethane	5.28	0.17	0.50	ug/l	5.00		106	70-130	9	30	
Chloroform	5.21	0.27	0.50	ug/l	5.00		104	70-130	15	30	
Chloromethane	4.95	0.23	0.50	ug/l	5.00		99	70-130	4	30	
cis-1,2-Dichloroethene	4.99	0.25	0.50	ug/l	5.00		100	70-130	11	30	
cis-1,3-Dichloropropene	5.06	0.30	0.50	ug/l	5.00		101	70-130	14	30	
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00		99	70-130	10	30	
Dibromomethane	4.93	0.20	0.50	ug/l	5.00		99	70-130	10	30	
Dichlorodifluoromethane (Freon 12)	4.92	0.45	0.50	ug/l	5.00		98	70-130	19	30	
Di-isopropyl ether	20.7	1.1	2.0	ug/l	20.0		104	70-130	20	30	
Ethyl tert-butyl ether	21.5	1.0	2.0	ug/l	20.0		107	70-130	29	30	
Ethylbenzene	5.16	0.21	0.50	ug/l	5.00		103	70-130	11	30	
Freon 113	5.43	1.5	5.0	ug/l	5.00		109	70-130	19	30	
Hexachlorobutadiene	5.33	0.40	0.50	ug/l	5.00		107	70-130	14	30	
Isopropylbenzene	5.16	0.18	0.50	ug/l	5.00		103	70-130	12	30	
m,p-Xylene	5.20	0.33	0.50	ug/l	5.00		104	70-130	9	30	
m-Dichlorobenzene	5.64	0.14	0.50	ug/l	5.00		113	70-130	11	30	
Methyl tert-butyl ether (MTBE)	20.3	0.94	2.0	ug/l	20.0		101	70-130	21	30	
Methylene chloride	5.13	0.30	0.50	ug/l	5.00		103	70-130	9	30	
Naphthalene	4.75	0.35	0.50	ug/l	5.00		95	70-130	16	30	
n-Butylbenzene	5.49	0.29	0.50	ug/l	5.00		110	70-130	14	30	
n-Propylbenzene	6.05	0.18	0.50	ug/l	5.00		121	70-130	12	30	
o-Dichlorobenzene	5.31	0.19	0.50	ug/l	5.00		106	70-130	10	30	
o-Xylene	5.21	0.20	0.50	ug/l	5.00		104	70-130	11	30	
p-Dichlorobenzene	5.64	0.18	0.50	ug/l	5.00		113	70-130	11	30	
p-Isopropyltoluene	5.64	0.25	0.50	ug/l	5.00		113	70-130	11	30	
sec-Butylbenzene	5.11	0.24	0.50	ug/l	5.00		102	70-130	12	30	
Styrene	5.35	0.19	0.50	ug/l	5.00		107	70-130	10	30	
Tert-amyl methyl ether	20.9	0.59	2.0	ug/l	20.0		104	70-130	25	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/03/2023 15:56

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W311948 - EPA 524.2 (Continued)											
LCS Dup (W311948-BSD1)					Prepared & Analyzed: 09/25/23						
tert-Butylbenzene	5.19	0.18	0.50	ug/l	5.00		104	70-130	11	30	
Tetrachloroethene	5.37	0.18	0.50	ug/l	5.00		107	70-130	13	30	
Toluene	5.61	0.29	0.50	ug/l	5.00		112	70-130	13	30	
trans-1,2-Dichloroethene	5.45	0.26	0.50	ug/l	5.00		109	70-130	18	30	
trans-1,3-Dichloropropene	4.69	0.32	0.50	ug/l	5.00		94	70-130	12	30	
Trichloroethene	5.25	0.18	0.50	ug/l	5.00		105	70-130	10	30	
Trichlorofluoromethane	5.40	0.18	0.50	ug/l	5.00		108	70-130	14	30	
Vinyl chloride	5.28	0.18	0.50	ug/l	5.00		106	70-130	15	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.4			ug/l	50.0		107	70-130			
4-Bromofluorobenzene	52.9			ug/l	50.0		106	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/03/2023 15:56

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 3J02083

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/07/2023

Received Date: 10/02/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

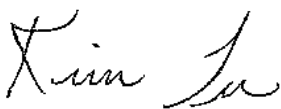
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/02/23 with the Chain-of-Custody document. The samples were received in good condition, at 9.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
Storm Drain	Client	3J02083-01	Water	10/02/23 12:00	
PT-SWC2-S4	Client	3J02083-02	Water	10/02/23 13:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

Sample Results

Sample: Storm Drain Sampled: 10/02/23 12:00 by Client
3J02083-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J0666		Preparation: EPA 508.1/SPE		Prepared: 10/09/23 08:49		Analyst: ajc	
2,4'-DDD	ND	0.0030	0.010	ug/l	1	10/31/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	10/31/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	10/31/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	10/31/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	10/31/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	10/31/23	
Alachlor	ND	0.026	0.20	ug/l	1	10/31/23	
Aldrin	ND	0.0040	0.010	ug/l	1	10/31/23	
alpha-BHC	ND	0.0015	0.010	ug/l	1	10/31/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	10/31/23	
Aroclor 1016	ND	0.10	0.10	ug/l	1	10/31/23	R-01
Aroclor 1221	ND	0.10	0.10	ug/l	1	10/31/23	R-01
Aroclor 1232	ND	0.10	0.10	ug/l	1	10/31/23	R-01
Aroclor 1242	ND	0.10	0.10	ug/l	1	10/31/23	R-01
Aroclor 1248	ND	0.10	0.10	ug/l	1	10/31/23	R-01
Aroclor 1254	ND	0.10	0.10	ug/l	1	10/31/23	R-01
Aroclor 1260	ND	0.10	0.10	ug/l	1	10/31/23	R-01
beta-BHC	ND	0.0045	0.010	ug/l	1	10/31/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	10/31/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	10/31/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	10/31/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	10/31/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	10/31/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	10/31/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	10/31/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	10/31/23	
Endrin	ND	0.0030	0.010	ug/l	1	10/31/23	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	10/31/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	10/31/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	10/31/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	10/31/23	
Heptachlor	ND	0.010	0.010	ug/l	1	10/31/23	R-01
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	10/31/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	10/31/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	10/31/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/07/2023 17:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain
3J02083-01 (Water) Sampled: 10/02/23 12:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08				
Batch ID: W3J0666	Preparation: EPA 508.1/SPE	Prepared: 10/09/23 08:49				
		Analyst: ajc				
Kepone	ND	0.038	0.20 ug/l	1	10/31/23	
Methoxychlor	ND	0.0030	0.010 ug/l	1	10/31/23	
Mirex	ND	0.0030	0.010 ug/l	1	10/31/23	
PCBs, Total	ND	0.10	0.50 ug/l	1	10/31/23	R-01
Propachlor	ND	0.045	0.20 ug/l	1	10/31/23	
Toxaphene	ND	0.37	1.0 ug/l	1	10/31/23	
trans-Nonachlor	ND	0.0020	0.010 ug/l	1	10/31/23	
Trifluralin	ND	0.0043	0.010 ug/l	1	10/31/23	

Surrogate(s)

4,4-Dibromobiphenyl	63%	Conc: 0.0645	70-130	10/31/23	S-04
---------------------	-----	--------------	--------	----------	------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15				
Batch ID: W3J0503	Preparation: _NONE (WETCHEM)	Prepared: 10/05/23 13:12				
		Analyst: mes				
Total Suspended Solids	1	5	mg/l	1	10/05/23	J

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06				
Batch ID: W3J0324	Preparation: EPA 200.2	Prepared: 10/05/23 10:22				
		Analyst: tyc				
Cadmium, Total	ND	0.042	0.20 ug/l	1	10/06/23	
Copper, Total	ND	0.23	0.50 ug/l	1	10/06/23	
Lead, Total	ND	0.083	0.20 ug/l	1	10/06/23	
Silver, Total	ND	0.055	0.20 ug/l	1	10/06/23	
Zinc, Total	ND	1.7	10 ug/l	1	10/06/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12				
Batch ID: W3J0178	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/02/23 18:46				
		Analyst: atd				
Total Coliform	ND	1.8	1.8 MPN/100mL	1	10/08/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08				
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06				
		Analyst: ADM				
Tert-butyl alcohol	ND	0.45	2.0 ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	93%	Conc: 46.6	70-130	10/07/23
4-Bromofluorobenzene	91%	Conc: 45.4	70-130	10/07/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-SWC2-S4
 3J02083-02 (Water) Sampled: 10/02/23 13:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B							
Batch ID: W3J1152	Preparation: _NONE (TOC/TOX)						
				Instr: TOC02			
				Prepared: 10/12/23 14:31			Analyst: rem
Total Organic Carbon (TOC)	0.48	0.19	0.30	mg/l	1	10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

Quality Control Results

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0666 - EPA 508.1											
Blank (W3J0666-BLK1)					Prepared: 10/09/23 Analyzed: 10/31/23						
2,4'-DDD	ND	0.0030	0.010	ug/l							
2,4'-DDE	ND	0.0030	0.010	ug/l							
2,4'-DDT	ND	0.0030	0.010	ug/l							
4,4'-DDD	ND	0.0030	0.010	ug/l							
4,4'-DDE	ND	0.0040	0.010	ug/l							
4,4'-DDT	ND	0.0030	0.010	ug/l							
Alachlor	ND	0.026	0.20	ug/l							
Aldrin	ND	0.0040	0.010	ug/l							
alpha-BHC	ND	0.0015	0.010	ug/l							
alpha-Chlordane	ND	0.0031	0.010	ug/l							
Aroclor 1016	ND	0.048	0.10	ug/l							
Aroclor 1221	ND	0.044	0.10	ug/l							
Aroclor 1232	ND	0.064	0.10	ug/l							
Aroclor 1242	ND	0.070	0.10	ug/l							
Aroclor 1248	ND	0.049	0.10	ug/l							
Aroclor 1254	ND	0.068	0.10	ug/l							
Aroclor 1260	ND	0.076	0.10	ug/l							
beta-BHC	ND	0.0045	0.010	ug/l							
Chlordane (tech)	ND	0.067	0.10	ug/l							
Chlorothalonil	ND	0.0040	0.050	ug/l							
cis-Nonachlor	ND	0.0030	0.010	ug/l							
delta-BHC	ND	0.0030	0.010	ug/l							
Dieldrin	ND	0.0030	0.010	ug/l							
Endosulfan I	ND	0.0030	0.010	ug/l							
Endosulfan II	ND	0.0019	0.010	ug/l							
Endosulfan sulfate	ND	0.0030	0.010	ug/l							
Endrin	ND	0.0030	0.010	ug/l							
Endrin aldehyde	ND	0.0040	0.010	ug/l							
Endrin ketone	ND	0.0042	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l							
gamma-Chlordane	ND	0.0074	0.010	ug/l							
Heptachlor	ND	0.0031	0.010	ug/l							
Heptachlor epoxide	ND	0.0019	0.010	ug/l							
Hexachlorobenzene	ND	0.0019	0.050	ug/l							
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l							
Kepone	ND	0.038	0.20	ug/l							
Methoxychlor	ND	0.0030	0.010	ug/l							
Mirex	ND	0.0030	0.010	ug/l							
PCBs, Total	ND	0.048	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/07/2023 17:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0666 - EPA 508.1 (Continued)											
Blank (W3J0666-BLK1)						Prepared: 10/09/23 Analyzed: 10/31/23					
Propachlor	ND	0.045	0.20	ug/l							
Toxaphene	ND	0.37	1.0	ug/l							
trans-Nonachlor	ND	0.0020	0.010	ug/l							
Trifluralin	ND	0.0043	0.010	ug/l							
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.126			ug/l	0.100		126	70-130			
LCS (W3J0666-BS1)						Prepared: 10/09/23 Analyzed: 10/31/23					
4,4'-DDD	0.102	0.0030	0.010	ug/l	0.100		102	70-130			
4,4'-DDE	0.0918	0.0040	0.010	ug/l	0.100		92	70-130			
4,4'-DDT	0.0932	0.0030	0.010	ug/l	0.100		93	70-130			
Aldrin	0.0938	0.0040	0.010	ug/l	0.100		94	70-130			
alpha-BHC	0.0983	0.0015	0.010	ug/l	0.100		98	70-130			
alpha-Chlordane	0.101	0.0031	0.010	ug/l	0.100		101	70-130			
beta-BHC	0.0944	0.0045	0.010	ug/l	0.100		94	70-130			
delta-BHC	0.0962	0.0030	0.010	ug/l	0.100		96	70-130			
Dieldrin	0.0930	0.0030	0.010	ug/l	0.100		93	70-130			
Endosulfan I	0.0862	0.0030	0.010	ug/l	0.100		86	70-130			
Endosulfan II	0.0924	0.0019	0.010	ug/l	0.100		92	70-130			
Endosulfan sulfate	0.109	0.0030	0.010	ug/l	0.100		109	70-130			
Endrin	0.0842	0.0030	0.010	ug/l	0.100		84	70-130			
Endrin aldehyde	0.0791	0.0040	0.010	ug/l	0.100		79	70-130			
Endrin ketone	0.113	0.0042	0.010	ug/l	0.100		113	70-130			
gamma-BHC (Lindane)	0.0975	0.0030	0.010	ug/l	0.100		97	70-130			
gamma-Chlordane	0.103	0.0074	0.010	ug/l	0.100		103	70-130			
Heptachlor	0.0963	0.0031	0.010	ug/l	0.100		96	70-130			
Heptachlor epoxide	0.101	0.0019	0.010	ug/l	0.100		101	70-130			
Methoxychlor	0.103	0.0030	0.010	ug/l	0.100		103	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.112			ug/l	0.100		112	70-130			
LCS (W3J0666-BS2)						Prepared: 10/09/23 Analyzed: 10/31/23					
Aroclor 1016	1.24	0.048	0.10	ug/l	1.00		124	70-130			
Aroclor 1260	0.970	0.076	0.10	ug/l	1.00		97	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.115			ug/l	0.100		115	70-130			
LCS Dup (W3J0666-BSD1)						Prepared: 10/09/23 Analyzed: 10/31/23					
4,4'-DDD	0.103	0.0030	0.010	ug/l	0.100		103	70-130	0.9	30	
4,4'-DDE	0.0909	0.0040	0.010	ug/l	0.100		91	70-130	1	30	
4,4'-DDT	0.0935	0.0030	0.010	ug/l	0.100		93	70-130	0.4	30	
Aldrin	0.0942	0.0040	0.010	ug/l	0.100		94	70-130	0.4	30	
alpha-BHC	0.102	0.0015	0.010	ug/l	0.100		102	70-130	4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0666 - EPA 508.1 (Continued)											
LCS Dup (W3J0666-BS1)											
					Prepared: 10/09/23 Analyzed: 10/31/23						
alpha-Chlordane	0.103	0.0031	0.010	ug/l	0.100		103	70-130	2	30	
beta-BHC	0.0973	0.0045	0.010	ug/l	0.100		97	70-130	3	30	
delta-BHC	0.0967	0.0030	0.010	ug/l	0.100		97	70-130	0.5	30	
Dieldrin	0.0950	0.0030	0.010	ug/l	0.100		95	70-130	2	30	
Endosulfan I	0.0893	0.0030	0.010	ug/l	0.100		89	70-130	4	30	
Endosulfan II	0.0945	0.0019	0.010	ug/l	0.100		94	70-130	2	30	
Endosulfan sulfate	0.108	0.0030	0.010	ug/l	0.100		108	70-130	0.9	30	
Endrin	0.0966	0.0030	0.010	ug/l	0.100		97	70-130	14	30	
Endrin aldehyde	0.0882	0.0040	0.010	ug/l	0.100		88	70-130	11	30	
Endrin ketone	0.111	0.0042	0.010	ug/l	0.100		111	70-130	2	30	
gamma-BHC (Lindane)	0.101	0.0030	0.010	ug/l	0.100		101	70-130	4	30	
gamma-Chlordane	0.105	0.0074	0.010	ug/l	0.100		105	70-130	2	30	
Heptachlor	0.0998	0.0031	0.010	ug/l	0.100		100	70-130	4	30	
Heptachlor epoxide	0.105	0.0019	0.010	ug/l	0.100		105	70-130	4	30	
Methoxychlor	0.104	0.0030	0.010	ug/l	0.100		104	70-130	1	30	
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.115			ug/l	0.100		115	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0503 - SM 2540D											
Blank (W3J0503-BLK1) Prepared & Analyzed: 10/05/23											
Total Suspended Solids	0.300		5	mg/l							J
LCS (W3J0503-BS1) Prepared & Analyzed: 10/05/23											
Total Suspended Solids	56.1		5	mg/l	51.1		110	90-110			
Duplicate (W3J0503-DUP1) Source: 3122018-05 Prepared & Analyzed: 10/05/23											
Total Suspended Solids	12.8		5	mg/l		12.8			0	10	
Duplicate (W3J0503-DUP2) Source: 3129004-01 Prepared & Analyzed: 10/05/23											
Total Suspended Solids	290		5	mg/l		310			7	10	
Batch: W3J1152 - SM 5310B											
Blank (W3J1152-BLK1) Prepared: 10/12/23 Analyzed: 10/13/23											
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							
LCS (W3J1152-BS1) Prepared: 10/12/23 Analyzed: 10/13/23											
Total Organic Carbon (TOC)	1.01	0.19	0.30	mg/l	1.00		101	85-115			
Matrix Spike (W3J1152-MS1) Source: 3122007-04 Prepared: 10/12/23 Analyzed: 10/13/23											
Total Organic Carbon (TOC)	5.96	0.19	0.30	mg/l	5.00	0.722	105	76-115			
Matrix Spike Dup (W3J1152-MSD1) Source: 3122007-04 Prepared: 10/12/23 Analyzed: 10/13/23											
Total Organic Carbon (TOC)	5.94	0.19	0.30	mg/l	5.00	0.722	104	76-115	0.3	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0324 - EPA 200.8											
Blank (W3J0324-BLK1)					Prepared: 10/04/23 Analyzed: 10/06/23						
Cadmium, Total	ND	0.042	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Silver, Total	ND	0.055	0.20	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W3J0324-BS1)											
					Prepared: 10/04/23 Analyzed: 10/06/23						
Cadmium, Total	50.1	0.042	0.20	ug/l	50.0		100	85-115			
Copper, Total	54.3	0.23	0.50	ug/l	50.0		108	85-115			
Lead, Total	50.6	0.083	0.20	ug/l	50.0		101	85-115			
Silver, Total	49.6	0.055	0.20	ug/l	50.0		99	85-115			
Zinc, Total	51.5	1.7	10	ug/l	50.0		103	85-115			
Matrix Spike (W3J0324-MS1)											
				Source: 3127070-08		Prepared: 10/04/23 Analyzed: 10/06/23					
Cadmium, Total	50.6	0.042	0.20	ug/l	50.0	ND	101	70-130			
Copper, Total	85.9	0.23	0.50	ug/l	50.0	32.3	107	70-130			
Lead, Total	50.9	0.083	0.20	ug/l	50.0	ND	102	70-130			
Silver, Total	50.2	0.055	0.20	ug/l	50.0	ND	100	70-130			
Zinc, Total	56.0	1.7	10	ug/l	50.0	5.30	101	70-130			
Matrix Spike Dup (W3J0324-MSD1)											
				Source: 3127070-08		Prepared: 10/04/23 Analyzed: 10/06/23					
Cadmium, Total	50.6	0.042	0.20	ug/l	50.0	ND	101	70-130	0.1	30	
Copper, Total	87.6	0.23	0.50	ug/l	50.0	32.3	110	70-130	2	30	
Lead, Total	51.3	0.083	0.20	ug/l	50.0	ND	103	70-130	0.9	30	
Silver, Total	50.7	0.055	0.20	ug/l	50.0	ND	101	70-130	0.9	30	
Zinc, Total	57.2	1.7	10	ug/l	50.0	5.30	104	70-130	2	30	

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0178 - SM 9221B											
Blank (W3J0178-BLK1)					Prepared: 10/02/23 Analyzed: 10/08/23						
Total Coliform	ND	1.8	1.8	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0533 - EPA 524.2											
Blank (W3J0533-BLK1)											
Prepared: 10/06/23 Analyzed: 10/07/23											
Tert-butyl alcohol	ND	0.45	2.0	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.2			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	43.5			ug/l	50.0		87	70-130			
LCS (W3J0533-BS1)											
Prepared: 10/06/23 Analyzed: 10/07/23											
Tert-butyl alcohol	20.7	0.45	2.0	ug/l	20.0		103	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.9			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	50.7			ug/l	50.0		101	70-130			
LCS Dup (W3J0533-BSD1)											
Prepared: 10/06/23 Analyzed: 10/07/23											
Tert-butyl alcohol	20.0	0.45	2.0	ug/l	20.0		100	70-130	3	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	48.9			ug/l	50.0		98	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:04

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
R-01	The MDL and/or MRL for this analyte has been raised to account for matrix interference.
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

3J02083

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order #

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING				
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved	200.8 (Ag, Cd, Cu, Pb, Zn)	2540 D SM - w solids, TSS	508.2 w Ext	5242 - w TBA	9221B SM#MFT-CD	TOC	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package
PROJECT MANAGER Chris Kindle		SAMPLER		invoice to Rose Ford, Rford@BrwnCald.com				Charges will apply for weekends/holidays				

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved	200.8 (Ag, Cd, Cu, Pb, Zn)	2540 D SM - w solids, TSS	508.2 w Ext	5242 - w TBA	9221B SM#MFT-CD	TOC	COMMENTS
	10/2	12:00pm	Gr	Storm Drain	8			X	X	X	X	X		
	10/2	1:pm	Gr	PT-SWC2-S4	2								X	

RELINQUISHED BY 	DATE / TIME 10/02/23 2:24pm	RECEIVED BY Ciro G.	SAMPLE CONDITION: Actual Temperature: 9.9 T-024	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY Ciro G.	DATE / TIME 10/02/23 03:40	RECEIVED BY 	10/2/23 15:41	<input checked="" type="checkbox"/> / <input type="checkbox"/> N <input checked="" type="checkbox"/> / <input type="checkbox"/> N <input type="checkbox"/> / <input checked="" type="checkbox"/> N <input type="checkbox"/> / <input checked="" type="checkbox"/> N
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.



Sample Receipt Checklist

Weck WKO: **3102083**

Date/Time Received: 10/02/23 15:41

WKO Logged by: Jaime Gomez

of Samples: 02

Samples Checked by: Jaime Gomez

Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature	9.9 °C			
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Ami added

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: 10/02/23

Work Orders: 3J02084

Report Date: 11/07/2023

Project: COSM 97-005

Received Date: 10/02/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/02/23 with the Chain-of-Custody document. The samples were received in good condition, at 9.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-SWC2-S4	Client	3J02084-01	Water	10/02/23 13:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
AWWA in Water Aggressive Index		✓	
SM 9215E in Water Heterotrophic Plate Count		✓	
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-SWC2-S4
3J02084-01 (Water) Sampled: 10/02/23 13:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W3J0117	Preparation: _NONE (LC)		Prepared: 10/03/23 08:29		Analyst: CLL		
Chloride, Total	130	0.19	0.50	mg/l	1	10/04/23	
Fluoride, Total	0.29	0.0090	0.10	mg/l	1	10/04/23	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W3J1903	Preparation: _NONE (METALS)		Prepared: 10/23/23 12:26		Analyst: aln		
Aggressive Index	12.4			AGI	1	10/23/23	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W3J0163	Preparation: _NONE (WETCHEM)		Prepared: 10/03/23 10:24		Analyst: bel		
Threshold Odor Number	1.0		1.0	T.O.N.	1	10/03/23 11:10	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W3J1122	Preparation: _NONE (WETCHEM)		Prepared: 10/12/23 10:17		Analyst: AEC		
Ammonia as N	0.040	0.017	0.10	mg/l	1	10/13/23	J
Method: EPA 353.2			Instr: AA01				
Batch ID: W3J0251	Preparation: _NONE (WETCHEM)		Prepared: 10/03/23 16:51		Analyst: ISM		
Nitrate as N	5.3	0.040	0.20	mg/l	1	10/03/23 18:39	
Nitrite as N	51	42	100	ug/l	1	10/03/23 18:39	J
Method: EPA 365.3			Instr: UVVIS04				
Batch ID: W3J1143	Preparation: _NONE (WETCHEM)		Prepared: 10/12/23 13:21		Analyst: ymt		
Phosphorus as PO4, Total	1.8	0.021	0.030	mg/l	1	10/23/23	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W3J0136	Preparation: _NONE (WETCHEM)		Prepared: 10/03/23 09:37		Analyst: kac		
Color	ND		3.0	Color Units	1	10/03/23 17:32	
Method: SM 2320B			Instr: AA02				
Batch ID: W3J0296	Preparation: _NONE (WETCHEM)		Prepared: 10/04/23 09:48		Analyst: mes		
Alkalinity as CaCO3	380	7.2	20	mg/l	1	10/04/23	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W3J1374	Preparation: _NONE (METALS)		Prepared: 10/16/23 16:25		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	70.8	-100	-100	N/A	1	10/16/23	A-01
Method: SM 2330B			Instr: [CALC]				
Batch ID: W3J1742	Preparation: _NONE (METALS)		Prepared: 10/19/23 14:57		Analyst: aln		
Langelier Index @ 20 C	0.474	-20.0	-10.0	LSI	1	10/19/23	
Langelier Index @ 60 C	0.984	-20.0	-10.0	LSI	1	10/19/23	
Method: SM 2540C			Instr: OVEN17				
Batch ID: W3J0233	Preparation: _NONE (WETCHEM)		Prepared: 10/03/23 15:19		Analyst: bel		
Total Dissolved Solids	1000	4.0	10	mg/l	1	10/04/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/07/2023 17:08

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SWC2-S4
3J02084-01 (Water) Sampled: 10/02/23 13:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 4500H+-B **Instr:** AA02
Batch ID: W3J0087 **Prepared:** 10/02/23 16:03
Preparation: _NONE (WETCHEM) **Analyst:** mes
pH **7.26** 0.10 0.10 pH Units 1 10/02/23 21:52 *

Hexavalent Chromium by IC

Method: EPA 218.6 **Instr:** LC13
Batch ID: W3J1089 **Prepared:** 10/12/23 08:21
Preparation: _NONE (LC) **Analyst:** CLL
Chromium 6+ **0.89** 0.0079 0.020 ug/l 1 10/12/23

Metals by EPA 200 Series Methods

Method: Calculation **Instr:** [CALC]
Batch ID: [CALC] **Prepared:** 10/04/23 10:16
Preparation: [CALC] **Analyst:** kvm
Hardness as CaCO3, Total **683** 0.344 3.31 mg/l 1 10/06/23

Method: EPA 200.7 **Instr:** ICP03
Batch ID: W3J0311 **Prepared:** 10/04/23 10:16
Preparation: EPA 200.2 **Analyst:** kvm
Calcium, Total **153** 0.0736 0.500 mg/l 1 10/06/23
Iron, Dissolved **ND** 5.0 30 ug/l 1 10/06/23
Iron, Total **5.0** 0.025 0.030 mg/l 1 10/06/23
Magnesium, Total **72.9** 0.0390 0.500 mg/l 1 10/06/23
Potassium, Total **4.0** 0.20 0.50 mg/l 1 10/06/23
Sodium, Total **90** 0.52 1.0 mg/l 1 10/06/23

Method: EPA 200.7 **Instr:** ICP03
Batch ID: W3J0810 **Prepared:** 10/10/23 10:11
Preparation: EPA 200.2 **Analyst:** kvm
Boron, Total **120** 3.0 10 ug/l 1 10/11/23
Silica as SiO2, Dissolved **36** 0.0086 0.10 mg/l 1 10/11/23
Silica as SiO2, Total **58** 0.0086 0.10 mg/l 1 10/11/23

Method: EPA 200.8 **Instr:** ICPMS06
Batch ID: W3J0324 **Prepared:** 10/05/23 10:22
Preparation: EPA 200.2 **Analyst:** tyc
Aluminum, Total **3600** 4.4 20 ug/l 1 10/06/23
Arsenic, Total **3.8** 0.074 0.40 ug/l 1 10/06/23
Barium, Total **110** 0.14 1.0 ug/l 1 10/06/23
Copper, Total **17** 0.23 0.50 ug/l 1 10/06/23
Lead, Total **3.7** 0.083 0.20 ug/l 1 10/06/23
Manganese, Dissolved **7.5** 0.11 1.0 ug/l 1 10/06/23
Manganese, Total **230** 0.23 1.0 ug/l 1 10/06/23
Selenium, Total **4.1** 0.067 0.40 ug/l 1 10/06/23
Strontium, Total **810** 0.036 0.20 ug/l 1 10/06/23

Microbiological Parameters by Standard Methods

Method: SM 9215E **Instr:** INC06
Batch ID: W3J0165 **Prepared:** 10/02/23 18:16
Preparation: _NONE (MICROBIOLOGY) **Analyst:** rea

3J02084

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SWC2-S4
3J02084-01 (Water) Sampled: 10/02/23 13:00 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Microbiological Parameters by Standard Methods (Continued)

Method: SM 9215E **Instr:** INC06
Batch ID: W3J0165 **Prepared:** 10/02/23 18:16
Preparation: _NONE (MICROBIOLOGY) **Analyst:** rea
Heterotrophic Plate Count ----- **>=740** 2.0 2.0 MPN/mL 1 10/04/23

Method: SM 9221B **Instr:** INC12
Batch ID: W3J0178 **Prepared:** 10/02/23 18:46
Preparation: _NONE (MICROBIOLOGY) **Analyst:** atd
Total Coliform ----- **23** 1.8 1.8 MPN/100mL 1 10/08/23

Sample Results

(Continued)

Sample: PT-SWC2-S4
3J02084-01RE1 (Water) Sampled: 10/02/23 13:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Anions by IC, EPA Method 300.0

Method: EPA 300.0 **Instr:** LC12
Batch ID: W3J0117 **Prepared:** 10/03/23 08:29
Preparation: _NONE (LC) **Analyst:** CLL
Sulfate as SO4 ----- **290** 0.72 1.5 mg/l 3 10/04/23

Anions by IC, EPA Method 300.1

Method: EPA 300.1 **Instr:** LC08_Channel2
Batch ID: W3J0150 **Prepared:** 10/03/23 10:05
Preparation: _NONE (LC) **Analyst:** JAN

Bromate	ND	2.8	10	ug/l	2	10/04/23	M-05
Bromide	680	3.4	20	ug/l	2	10/04/23	M-05
Chlorate	77	3.4	20	ug/l	2	10/04/23	M-05
Chlorite	ND	4.4	20	ug/l	2	10/04/23	M-05

Surrogate(s)

Dichloroacetate	104%	Conc: 521	90-115			10/04/23	
-----------------	------	-----------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0117 - EPA 300.0											
Blank (W3J0117-BLK1)					Prepared & Analyzed: 10/03/23						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W3J0117-BS1)					Prepared & Analyzed: 10/03/23						
Chloride, Total	20.9	0.19	0.50	mg/l	20.0		105	90-110			
Fluoride, Total	2.02	0.0090	0.10	mg/l	2.00		101	90-110			
Sulfate as SO4	20.8	0.24	0.50	mg/l	20.0		104	90-110			
Matrix Spike (W3J0117-MS1)					Source: 3128006-01		Prepared: 10/03/23 Analyzed: 10/04/23				
Chloride, Total	245	1.9	5.0	mg/l	200	33.7	105	76-118			
Fluoride, Total	21.2	0.090	1.0	mg/l	20.0	0.388	104	86-107			
Sulfate as SO4	272	2.4	5.0	mg/l	200	61.6	105	78-111			
Matrix Spike (W3J0117-MS2)					Source: 3128006-02		Prepared: 10/03/23 Analyzed: 10/04/23				
Chloride, Total	249	1.9	5.0	mg/l	200	33.5	108	76-118			
Fluoride, Total	21.1	0.090	1.0	mg/l	20.0	0.384	103	86-107			
Sulfate as SO4	276	2.4	5.0	mg/l	200	61.7	107	78-111			
Matrix Spike Dup (W3J0117-MSD1)					Source: 3128006-01		Prepared: 10/03/23 Analyzed: 10/04/23				
Chloride, Total	245	1.9	5.0	mg/l	200	33.7	106	76-118	0.07	20	
Fluoride, Total	20.6	0.090	1.0	mg/l	20.0	0.388	101	86-107	3	20	
Sulfate as SO4	272	2.4	5.0	mg/l	200	61.6	105	78-111	0.2	20	
Matrix Spike Dup (W3J0117-MSD2)					Source: 3128006-02		Prepared: 10/03/23 Analyzed: 10/04/23				
Chloride, Total	249	1.9	5.0	mg/l	200	33.5	108	76-118	0.2	20	
Fluoride, Total	20.9	0.090	1.0	mg/l	20.0	0.384	103	86-107	0.8	20	
Sulfate as SO4	277	2.4	5.0	mg/l	200	61.7	108	78-111	0.3	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier	
Batch: W3J0150 - EPA 300.1												
Blank (W3J0150-BLK1)					Prepared & Analyzed: 10/03/23							
Bromate	ND	1.4	5.0	ug/l								
Bromide	ND	1.7	10	ug/l								
Chlorate	ND	1.7	10	ug/l								
Chlorite	ND	2.2	10	ug/l								
<i>Surrogate(s)</i>												
Dichloroacetate	471			ug/l	500		94	90-115				
Blank (W3J0150-BLK2)					Prepared: 10/03/23 Analyzed: 10/04/23							
Bromate	ND	1.4	5.0	ug/l							QC-2	
Bromide	ND	1.7	10	ug/l							QC-2	
Chlorate	ND	1.7	10	ug/l							QC-2	
Chlorite	ND	2.2	10	ug/l							QC-2	
<i>Surrogate(s)</i>												
Dichloroacetate	498			ug/l	500		100	90-115				
LCS (W3J0150-BS1)					Prepared & Analyzed: 10/03/23							
Bromate	95.8	1.4	5.0	ug/l	100		96	85-115				
Bromide	99.0	1.7	10	ug/l	100		99	85-115				
Chlorate	91.6	1.7	10	ug/l	100		92	85-115				
Chlorite	90.1	2.2	10	ug/l	100		90	85-115				
<i>Surrogate(s)</i>												
Dichloroacetate	505			ug/l	500		101	90-115				
LCS (W3J0150-BS2)					Prepared: 10/03/23 Analyzed: 10/04/23							
Bromate	97.3	1.4	5.0	ug/l	100		97	85-115			QC-2	
Bromide	110	1.7	10	ug/l	100		110	85-115			QC-2	
Chlorate	100	1.7	10	ug/l	100		100	85-115			QC-2	
Chlorite	86.5	2.2	10	ug/l	100		87	85-115			QC-2	
<i>Surrogate(s)</i>												
Dichloroacetate	502			ug/l	500		100	90-115				
Matrix Spike (W3J0150-MS1)					Source: 3120064-04			Prepared & Analyzed: 10/03/23				
Bromate	87.6	1.4	5.0	ug/l	100	ND	88	64-133				
Bromide	99.4	1.7	10	ug/l	100	3.88	96	73-125				
Chlorate	95.7	1.7	10	ug/l	100	20.0	76	76-120				
Chlorite	83.3	2.2	10	ug/l	100	ND	83	78-129				
<i>Surrogate(s)</i>												
Dichloroacetate	485			ug/l	500		97	90-115				
Matrix Spike (W3J0150-MS2)					Source: 3120064-05			Prepared & Analyzed: 10/03/23				
Bromate	92.1	1.4	5.0	ug/l	100	ND	92	64-133				
Bromide	98.2	1.7	10	ug/l	100	2.59	96	73-125				
Chlorate	633	1.7	10	ug/l	100	584	49	76-120			MS-02	
Chlorite	84.8	2.2	10	ug/l	100	ND	85	78-129				
<i>Surrogate(s)</i>												

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Anions by IC, EPA Method 300.1 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0150 - EPA 300.1 (Continued)											
Matrix Spike (W3J0150-MS2)			Source: 3120064-05			Prepared & Analyzed: 10/03/23					
<i>Surrogate(s)</i>											
Dichloroacetate	496			ug/l	500		99	90-115			
Matrix Spike Dup (W3J0150-MSD1)			Source: 3120064-04			Prepared & Analyzed: 10/03/23					
Bromate	84.1	1.4	5.0	ug/l	100	ND	84	64-133	4	20	
Bromide	92.0	1.7	10	ug/l	100	3.88	88	73-125	8	20	
Chlorate	102	1.7	10	ug/l	100	20.0	82	76-120	6	20	
Chlorite	78.8	2.2	10	ug/l	100	ND	79	78-129	6	20	
<i>Surrogate(s)</i>											
Dichloroacetate	464			ug/l	500		93	90-115			
Matrix Spike Dup (W3J0150-MSD2)			Source: 3120064-05			Prepared & Analyzed: 10/03/23					
Bromate	81.3	1.4	5.0	ug/l	100	ND	81	64-133	12	20	
Bromide	88.4	1.7	10	ug/l	100	2.59	86	73-125	10	20	
Chlorate	605	1.7	10	ug/l	100	584	21	76-120	4	20	MS-02
Chlorite	81.5	2.2	10	ug/l	100	ND	81	78-129	4	20	
<i>Surrogate(s)</i>											
Dichloroacetate	461			ug/l	500		92	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0087 - SM 4500H+-B											
LCS (W3J0087-BS1) Prepared & Analyzed: 10/02/23											
pH	6.94	0.10	0.10	pH Units	6.86		101	98.8-101			
Duplicate (W3J0087-DUP1) Source: 3J06001-01 Prepared & Analyzed: 10/02/23											
pH	7.83	0.10	0.10	pH Units		7.82			0.1	3.1	
Batch: W3J0136 - SM 2120B											
LCS (W3J0136-BS1) Prepared & Analyzed: 10/03/23											
Color	10.0		3.0	Color Units	10.0		100	95-105			
Duplicate (W3J0136-DUP1) Source: 3J02078-01 Prepared & Analyzed: 10/03/23											
Color	ND		3.0	Color Units		ND				10	
Duplicate (W3J0136-DUP2) Source: 3J02078-02 Prepared & Analyzed: 10/03/23											
Color	ND		3.0	Color Units		ND				10	
Batch: W3J0163 - EPA 140.1											
Blank (W3J0163-BLK1) Prepared & Analyzed: 10/03/23											
Threshold Odor Number	1.0		1.0	T.O.N.							J
Duplicate (W3J0163-DUP1) Source: 3J02082-08 Prepared & Analyzed: 10/03/23											
Threshold Odor Number	1.0		1.0	T.O.N.		1.0			0	20	J
Batch: W3J0233 - SM 2540C											
Blank (W3J0233-BLK1) Prepared: 10/03/23 Analyzed: 10/04/23											
Total Dissolved Solids	ND	4.0	10	mg/l							
LCS (W3J0233-BS1) Prepared: 10/03/23 Analyzed: 10/04/23											
Total Dissolved Solids	827	4.0	10	mg/l	824		100	97-103			
Duplicate (W3J0233-DUP1) Source: 3G10002-01 Prepared: 10/03/23 Analyzed: 10/04/23											
Total Dissolved Solids	904	4.0	10	mg/l		875			3	10	
Duplicate (W3J0233-DUP2) Source: 3J02084-01 Prepared: 10/03/23 Analyzed: 10/04/23											
Total Dissolved Solids	1070	4.0	10	mg/l		1040			3	10	
Batch: W3J0251 - EPA 353.2											
Blank (W3J0251-BLK1) Prepared & Analyzed: 10/03/23											
Nitrate as N	ND	0.040	0.15	mg/l							
Nitrite as N	ND	42	100	ug/l							
LCS (W3J0251-BS1) Prepared & Analyzed: 10/03/23											
Nitrate as N	1.08	0.040	0.15	mg/l	1.00		108	90-110			
Nitrite as N	1010	42	100	ug/l	1000		101	90-110			
Matrix Spike (W3J0251-MS1) Source: 3J02054-01 Prepared & Analyzed: 10/03/23											
Nitrate as N	11.6	0.040	0.15	mg/l	2.00	9.88	86	90-110			MS-02
Nitrite as N	1030	42	100	ug/l	1000	ND	103	90-110			
Matrix Spike (W3J0251-MS2) Source: 3J02054-24 Prepared & Analyzed: 10/03/23											
Nitrate as N	8.90	0.040	0.15	mg/l	2.00	7.02	94	90-110			
Nitrite as N	1040	42	100	ug/l	1000	ND	104	90-110			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0251 - EPA 353.2 (Continued)											
Matrix Spike (W3J0251-MS3) Source: 3J02054-01 Prepared & Analyzed: 10/03/23											
Nitrate as N	17.6	0.16	0.60	mg/l	8.00	9.88	97	90-110			
Matrix Spike Dup (W3J0251-MSD1) Source: 3J02054-01 Prepared & Analyzed: 10/03/23											
Nitrate as N	11.6	0.040	0.15	mg/l	2.00	9.88	86	90-110	0	20	MS-02
Nitrite as N	1030	42	100	ug/l	1000	ND	103	90-110	0	20	
Matrix Spike Dup (W3J0251-MSD2) Source: 3J02054-24 Prepared & Analyzed: 10/03/23											
Nitrate as N	8.87	0.040	0.15	mg/l	2.00	7.02	92	90-110	0.3	20	
Nitrite as N	1040	42	100	ug/l	1000	ND	104	90-110	0	20	
Matrix Spike Dup (W3J0251-MSD3) Source: 3J02054-01 Prepared & Analyzed: 10/03/23											
Nitrate as N	17.6	0.16	0.60	mg/l	8.00	9.88	96	90-110	0.2	20	
Batch: W3J0296 - SM 2320B											
Blank (W3J0296-BLK1) Prepared & Analyzed: 10/04/23											
Alkalinity as CaCO3	ND	7.2	20	mg/l							
LCS (W3J0296-BS1) Prepared & Analyzed: 10/04/23											
Alkalinity as CaCO3	188	7.2	20	mg/l	186		101	94-108			
Duplicate (W3J0296-DUP1) Source: 3I28006-01 Prepared & Analyzed: 10/04/23											
Alkalinity as CaCO3	144	7.2	20	mg/l		155			7	15	
Batch: W3J1122 - EPA 350.1											
Blank (W3J1122-BLK1) Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W3J1122-BLK2) Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W3J1122-BS1) Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	0.256	0.017	0.10	mg/l	0.250		102	90-110			
LCS (W3J1122-BS2) Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	0.245	0.017	0.10	mg/l	0.250		98	90-110			
Matrix Spike (W3J1122-MS1) Source: 3J06036-03 Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	1.60	0.017	0.10	mg/l	0.250	1.36	97	90-110			
Matrix Spike (W3J1122-MS2) Source: 3J06117-01 Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	0.272	0.017	0.10	mg/l	0.250	0.0290	97	90-110			
Matrix Spike Dup (W3J1122-MSD1) Source: 3J06036-03 Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	1.60	0.017	0.10	mg/l	0.250	1.36	98	90-110	0.2	15	
Matrix Spike Dup (W3J1122-MSD2) Source: 3J06117-01 Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	0.272	0.017	0.10	mg/l	0.250	0.0290	97	90-110	0.04	15	
Batch: W3J1143 - EPA 365.3											
Blank (W3J1143-BLK1) Prepared: 10/12/23 Analyzed: 10/23/23											
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W3J1143-BS1) Prepared: 10/12/23 Analyzed: 10/23/23											

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1143 - EPA 365.3 (Continued)											
LCS (W3J1143-BS1)											
Phosphorus as PO ₄ , Total	0.611	0.021	0.030	mg/l	0.612		100	90-110			
Prepared: 10/12/23 Analyzed: 10/23/23											
Matrix Spike (W3J1143-MS1)											
Phosphorus as PO ₄ , Total	0.998	0.021	0.030	mg/l	0.612	0.357	105	90-110			
Source: 3J03095-02 Prepared: 10/12/23 Analyzed: 10/23/23											
Matrix Spike Dup (W3J1143-MSD1)											
Phosphorus as PO ₄ , Total	0.962	0.021	0.030	mg/l	0.612	0.357	99	90-110	4	20	
Source: 3J03095-02 Prepared: 10/12/23 Analyzed: 10/23/23											

Quality Control Results

(Continued)

Hexavalent Chromium by IC

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1089 - EPA 218.6											
Blank (W3J1089-BLK1)											
Chromium 6+	ND	0.0079	0.020	ug/l							
Prepared & Analyzed: 10/12/23											
LCS (W3J1089-BS1)											
Chromium 6+	5.32	0.0079	0.020	ug/l	5.00		106	90-110			
Prepared & Analyzed: 10/12/23											
Matrix Spike (W3J1089-MS1)											
Chromium 6+	5.32	0.0079	0.020	ug/l	5.00	0.139	104	88-112			
Source: 3J11052-04 Prepared & Analyzed: 10/12/23											
Matrix Spike Dup (W3J1089-MSD1)											
Chromium 6+	5.42	0.0079	0.020	ug/l	5.00	0.139	106	88-112	2	10	
Source: 3J11052-04 Prepared & Analyzed: 10/12/23											

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0311 - EPA 200.7											
Blank (W3J0311-BLK1)					Prepared: 10/04/23 Analyzed: 10/06/23						
Calcium, Total	ND	0.0736	0.500	mg/l							
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.025	0.030	mg/l							
Magnesium, Total	ND	0.0390	0.500	mg/l							
Potassium, Total	ND	0.20	0.50	mg/l							
Sodium, Total	ND	0.52	1.0	mg/l							
Blank (W3J0311-BLK2)					Prepared: 10/04/23 Analyzed: 10/09/23						
Calcium, Total	ND	0.0736	0.500	mg/l							
Magnesium, Total	ND	0.0390	0.500	mg/l							
LCS (W3J0311-BS1)					Prepared: 10/04/23 Analyzed: 10/06/23						
Calcium, Total	49.6	0.0736	0.500	mg/l	50.2		99	85-115			
Iron, Dissolved	208	5.0	30	ug/l	200		104	85-115			
Iron, Total	0.208	0.025	0.030	mg/l	0.200		104	85-115			
Magnesium, Total	48.8	0.0390	0.500	mg/l	50.2		97	85-115			
Potassium, Total	55.3	0.20	0.50	mg/l	52.1		106	85-115			
Sodium, Total	48.6	0.52	1.0	mg/l	50.2		97	85-115			
LCS (W3J0311-BS2)					Prepared: 10/04/23 Analyzed: 10/09/23						
Calcium, Total	49.0	0.0736	0.500	mg/l	50.2		98	85-115			
Magnesium, Total	49.2	0.0390	0.500	mg/l	50.2		98	85-115			
Matrix Spike (W3J0311-MS1)					Source: 3122016-01 Prepared: 10/04/23 Analyzed: 10/06/23						
Calcium, Total	113	0.0736	0.500	mg/l	50.2	66.1	93	70-130			
Iron, Dissolved	224	5.0	30	ug/l	200	18.4	103	70-130			
Iron, Total	0.224	0.025	0.030	mg/l	0.200	ND	112	70-130			
Magnesium, Total	61.2	0.0390	0.500	mg/l	50.2	13.1	96	70-130			
Potassium, Total	59.4	0.20	0.50	mg/l	52.1	2.28	110	70-130			
Sodium, Total	102	0.52	1.0	mg/l	50.2	51.7	100	70-130			
Matrix Spike (W3J0311-MS2)					Source: 3122016-01 Prepared: 10/04/23 Analyzed: 10/09/23						
Calcium, Total	111	0.0736	0.500	mg/l	50.2	66.1	90	70-130			
Magnesium, Total	61.8	0.0390	0.500	mg/l	50.2	13.1	97	70-130			
Matrix Spike Dup (W3J0311-MSD1)					Source: 3122016-01 Prepared: 10/04/23 Analyzed: 10/06/23						
Calcium, Total	113	0.0736	0.500	mg/l	50.2	66.1	95	70-130	0.7	30	
Iron, Dissolved	226	5.0	30	ug/l	200	18.4	104	70-130	1	30	
Iron, Total	0.226	0.025	0.030	mg/l	0.200	ND	113	70-130	1	30	
Magnesium, Total	61.9	0.0390	0.500	mg/l	50.2	13.1	97	70-130	1	30	
Potassium, Total	60.1	0.20	0.50	mg/l	52.1	2.28	111	70-130	1	30	
Sodium, Total	102	0.52	1.0	mg/l	50.2	51.7	101	70-130	0.6	30	
Matrix Spike Dup (W3J0311-MSD2)					Source: 3122016-01 Prepared: 10/04/23 Analyzed: 10/09/23						
Calcium, Total	112	0.0736	0.500	mg/l	50.2	66.1	92	70-130	0.6	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0311 - EPA 200.7 (Continued)											
Matrix Spike Dup (W3J0311-MSD2)		Source: 3122016-01			Prepared: 10/04/23 Analyzed: 10/09/23						
Magnesium, Total	62.4	0.0390	0.500	mg/l	50.2	13.1	98	70-130	1	30	
Batch: W3J0324 - EPA 200.8											
Blank (W3J0324-BLK1)					Prepared: 10/04/23 Analyzed: 10/06/23						
Aluminum, Total	ND	4.4	20	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	0.131	0.11	1.0	ug/l							J
Manganese, Total	ND	0.23	1.0	ug/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W3J0324-BS1)					Prepared: 10/04/23 Analyzed: 10/06/23						
Aluminum, Total	52.7	4.4	20	ug/l	50.0		105	85-115			
Arsenic, Total	51.8	0.074	0.40	ug/l	50.0		104	85-115			
Barium, Total	50.3	0.14	1.0	ug/l	50.0		100	85-115			
Copper, Total	54.3	0.23	0.50	ug/l	50.0		108	85-115			
Lead, Total	50.6	0.083	0.20	ug/l	50.0		101	85-115			
Manganese, Dissolved	52.9	0.11	1.0	ug/l	50.0		106	85-115			
Manganese, Total	52.9	0.23	1.0	ug/l	50.0		106	85-115			
Selenium, Total	50.2	0.067	0.40	ug/l	50.0		100	85-115			
Strontium, Total	50.2	0.036	0.20	ug/l	50.0		100	85-115			
Matrix Spike (W3J0324-MS1)		Source: 3127070-08			Prepared: 10/04/23 Analyzed: 10/06/23						
Aluminum, Total	54.1	4.4	20	ug/l	50.0	ND	108	70-130			
Arsenic, Total	54.7	0.074	0.40	ug/l	50.0	2.07	105	70-130			
Barium, Total	186	0.14	1.0	ug/l	50.0	133	105	70-130			
Copper, Total	85.9	0.23	0.50	ug/l	50.0	32.3	107	70-130			
Lead, Total	50.9	0.083	0.20	ug/l	50.0	ND	102	70-130			
Manganese, Dissolved	52.9	0.11	1.0	ug/l	50.0	ND	106	70-130			
Manganese, Total	52.9	0.23	1.0	ug/l	50.0	ND	106	70-130			
Selenium, Total	52.2	0.067	0.40	ug/l	50.0	1.69	101	70-130			
Strontium, Total	655	0.036	0.20	ug/l	50.0	591	127	70-130			
Matrix Spike Dup (W3J0324-MSD1)		Source: 3127070-08			Prepared: 10/04/23 Analyzed: 10/06/23						
Aluminum, Total	55.8	4.4	20	ug/l	50.0	ND	111	70-130	3	30	
Arsenic, Total	55.4	0.074	0.40	ug/l	50.0	2.07	107	70-130	1	30	
Barium, Total	189	0.14	1.0	ug/l	50.0	133	111	70-130	2	30	
Copper, Total	87.6	0.23	0.50	ug/l	50.0	32.3	110	70-130	2	30	
Lead, Total	51.3	0.083	0.20	ug/l	50.0	ND	103	70-130	0.9	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0324 - EPA 200.8 (Continued)											
Matrix Spike Dup (W3J0324-MSD1)		Source: 3I27070-08			Prepared: 10/04/23 Analyzed: 10/06/23						
Manganese, Dissolved	53.7	0.11	1.0	ug/l	50.0	ND	107	70-130	1	30	
Manganese, Total	53.7	0.23	1.0	ug/l	50.0	ND	107	70-130	1	30	
Selenium, Total	52.3	0.067	0.40	ug/l	50.0	1.69	101	70-130	0.2	30	
Strontium, Total	664	0.036	0.20	ug/l	50.0	591	146	70-130	1	30	MS-02

Batch: W3J0810 - EPA 200.7

Blank (W3J0810-BLK1)											
Prepared: 10/10/23 Analyzed: 10/11/23											
Boron, Total	ND	3.0	10	ug/l							
Silica as SiO2, Dissolved	ND	0.0086	0.10	mg/l							
Silica as SiO2, Total	ND	0.0086	0.10	mg/l							

LCS (W3J0810-BS1)											
Prepared: 10/10/23 Analyzed: 10/11/23											
Boron, Total	217	3.0	10	ug/l	200		108	85-115			
Silica as SiO2, Dissolved	43.6	0.0086	0.10	mg/l	43.2		101	85-115			
Silica as SiO2, Total	43.6	0.0086	0.10	mg/l	43.2		101	85-115			

Matrix Spike (W3J0810-MS1)											
Source: 3J06050-01											
Prepared: 10/10/23 Analyzed: 10/11/23											
Boron, Total	814	3.0	10	ug/l	200	579	118	70-130			
Silica as SiO2, Dissolved	73.3	0.0086	0.10	mg/l	43.2	27.9	105	70-130			
Silica as SiO2, Total	73.3	0.0086	0.10	mg/l	43.2	27.9	105	70-130			

Matrix Spike Dup (W3J0810-MSD1)											
Source: 3J06050-01											
Prepared: 10/10/23 Analyzed: 10/11/23											
Boron, Total	808	3.0	10	ug/l	200	579	115	70-130	0.7	30	
Silica as SiO2, Dissolved	72.6	0.0086	0.10	mg/l	43.2	27.9	104	70-130	0.9	30	
Silica as SiO2, Total	72.6	0.0086	0.10	mg/l	43.2	27.9	104	70-130	0.9	30	

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0178 - SM 9221B											
Blank (W3J0178-BLK1)											
Prepared: 10/02/23 Analyzed: 10/08/23											
Total Coliform	ND	1.8	1.8	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:08

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
<u>>=740</u>	>=740
A-01	Using default tetperature 20C for calculation
J	Estimated conc. detected <MRL and >MDL.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

3J02084

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order #

Page 1 Of 1

CLIENT NAME:		PROJECT:				ANALYSES REQUESTED										SPECIAL HANDLING									
Brown and Caldwell - Los Angeles		COSM 97-005				140.1 Odor, 2120B Color	200.7/200.8 Total&Dissolved Metals*	alkalinity, TDS	300.0 Cl, F, SO4	300.1**	350.1 Ammonia, 353.2 NO2, NO3	365.3 PO4	Aggressive Index, CCP, LSI, Hardness	9215E TPC-Simplate	9221 MFT	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package									
ADDRESS:		PHONE:														Charges will apply for weekends/holidays									
1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		ckindle@BrwnCald.com														Method of Shipment:									
PROJECT MANAGER		SAMPLER				COMMENTS																			
Chris Kindle		invoice to Rose Ford, Rford@BrwnCald.com				*Bacteriological Testing has a strict 8 hour holding time. Lab must receive the samples within 6 hours of collection to have sufficient time to prepare and incubate the samples before expiration.																			
ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONF.																				
	10/2	1 PM	G	PT-SWCZ-S4	10	X	X	X	X	X	X	X	X	X	X	X									

RELINQUISHED BY:	DATE / TIME: 10/02/23 2:24pm	RECEIVED BY:	SAMPLE CONDITION: Actual Temperature: 9.9	SAMPLE TYPE CODE: AQ=Aqueous, NA=Non Aqueous, SL=Sludge, DW=Drinking Water, WW=Waste Water, RW=Rain Water, GW=Ground Water, SO=Soil, SW=Solid Waste, OL=Oil, OT=Other Matrix
RELINQUISHED BY:	DATE / TIME: 10/02/23 03:40	RECEIVED BY:	Received On Ice: 7-0281	
RELINQUISHED BY:	DATE / TIME:	RECEIVED BY:	Evidence Seals Present: Y/N	
			Container Attacked: Y/N	
			Preserved at Lab: Y/N	

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: 3J02084
 WKO Logged by: Jaime Gomez
 Samples Checked by: Jaime Gomez

Date/Time Received: 10/02/23 15:41
 # of Samples: 02
 Delivered by: RMS

	Task	Yes	No	N/A	Comments
COC	COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Receipt Information	Sample Temperature	9.9 °C			
	Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Ice Type (Blue/Wet)				
	All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
	Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample Preservation Verification?	Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
	pH verified upon receipt?				pH paper Lot# 3082367
	Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cl Test Strip Lot#
	O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
	pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading: Acid Lot# Amt added:
	Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jaime Gomez

Date: 10/02/23

Work Orders: 3J03146

Report Date: 11/07/2023

Project: COSM 97-005

Received Date: 10/03/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/03/23 with the Chain-of-Custody document. The samples were received in good condition, at 18.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-SW4-S4	Client	3J03146-01	Water	10/03/23 09:53	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
AWWA in Water Aggressive Index		✓	
SM 9215E in Water Heterotrophic Plate Count		✓	
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-SW4-S4
 3J03146-01 (Water) Sampled: 10/03/23 9:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Anions by IC, EPA Method 300.0

Method: EPA 300.0				Instr: LC12			
Batch ID: W3J0542	Preparation: _NONE (LC)			Prepared: 10/06/23 08:07		Analyst: CLL	
Chloride, Total	130	0.19	0.50	mg/l	1	10/06/23	
Fluoride, Total	0.32	0.0090	0.10	mg/l	1	10/06/23	

Anions by IC, EPA Method 300.1

Method: EPA 300.1				Instr: LC08_Channel2			
Batch ID: W3J1288	Preparation: _NONE (LC)			Prepared: 10/16/23 09:58		Analyst: CLL	
Chlorate	94	1.7	10	ug/l	1	10/17/23	
Chlorite	ND	2.2	10	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
Dichloroacetate	98%	Conc: 489	90-115			10/17/23	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: AWWA				Instr: [CALC]			
Batch ID: W3J1912	Preparation: _NONE (METALS)			Prepared: 10/23/23 13:02		Analyst: aln	
Aggressive Index	12.4			AGI	1	10/23/23	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W3J0263	Preparation: _NONE (WETCHEM)			Prepared: 10/03/23 18:57		Analyst: bel	
Threshold Odor Number	1.0		1.0	T.O.N.	1	10/03/23 20:41	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W3J1122	Preparation: _NONE (WETCHEM)			Prepared: 10/12/23 10:17		Analyst: AEC	
Ammonia as N	0.069	0.017	0.10	mg/l	1	10/13/23	J
Method: EPA 353.2				Instr: AA01			
Batch ID: W3J0373	Preparation: _NONE (WETCHEM)			Prepared: 10/04/23 13:10		Analyst: ISM	
Nitrate as N	6.0	0.040	0.20	mg/l	1	10/04/23 18:26	
Nitrite as N	ND	42	100	ug/l	1	10/04/23 18:26	
Method: EPA 365.3				Instr: UVVIS04			
Batch ID: W3J1143	Preparation: _NONE (WETCHEM)			Prepared: 10/12/23 13:21		Analyst: ymt	
Phosphorus as PO4, Total	0.30	0.021	0.030	mg/l	1	10/23/23	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W3J0291	Preparation: _NONE (WETCHEM)			Prepared: 10/04/23 09:32		Analyst: kac	
Color	ND		3.0	Color Units	1	10/04/23 17:28	
Method: SM 2320B				Instr: AA02			
Batch ID: W3J0296	Preparation: _NONE (WETCHEM)			Prepared: 10/04/23 09:48		Analyst: mes	
Alkalinity as CaCO3	370	7.2	20	mg/l	1	10/04/23	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W3J1744	Preparation: _NONE (METALS)			Prepared: 10/19/23 15:37		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	63.2	-100	-100	N/A	1	10/19/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW4-S4
3J03146-01 (Water) Sampled: 10/03/23 9:53 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W3J1911	Preparation: _NONE (METALS)			Prepared: 10/23/23 13:01		Analyst: aln	
Langelier Index @ 20 C	0.426	-20.0	-10.0	LSI	1	10/23/23	
Langelier Index @ 60 C	0.934	-20.0	-10.0	LSI	1	10/23/23	
Method: SM 2540C				Instr: OVEN17			
Batch ID: W3J0395	Preparation: _NONE (WETCHEM)			Prepared: 10/04/23 17:12		Analyst: bel	
Total Dissolved Solids	1100	4.0	10	mg/l	1	10/05/23	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W3J0392	Preparation: _NONE (WETCHEM)			Prepared: 10/04/23 16:51		Analyst: mes	
pH	7.25	0.10	0.10	pH Units	1	10/04/23 18:14	*
Hexavalent Chromium by IC							
Method: EPA 218.6				Instr: LC13			
Batch ID: W3J1089	Preparation: _NONE (LC)			Prepared: 10/12/23 08:21		Analyst: CLL	
Chromium 6+	0.70	0.0079	0.020	ug/l	1	10/12/23	
Metals by EPA 200 Series Methods							
Method: Calculation				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 10/12/23 09:28		Analyst: kvm	
Hardness as CaCO3, Total	664	0.221	3.31	mg/l	1	10/17/23	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W3J1108	Preparation: EPA 200.2			Prepared: 10/12/23 09:28		Analyst: kvm	
Boron, Total	130	3.0	10	ug/l	1	10/17/23	
Calcium, Total	148	0.0240	0.500	mg/l	1	10/17/23	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/17/23	
Iron, Total	0.10	0.0065	0.030	mg/l	1	10/17/23	
Magnesium, Total	71.4	0.0390	0.500	mg/l	1	10/17/23	
Potassium, Total	3.2	0.086	0.50	mg/l	1	10/17/23	
Silica as SiO2, Dissolved	37	0.0086	0.10	mg/l	1	10/17/23	
Silica as SiO2, Total	37	0.0086	0.10	mg/l	1	10/17/23	
Sodium, Total	90	0.13	1.0	mg/l	1	10/17/23	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W3J1110	Preparation: EPA 200.2			Prepared: 10/12/23 15:19		Analyst: tyc	
Aluminum, Total	34	4.4	20	ug/l	1	10/16/23	
Arsenic, Total	0.77	0.074	0.40	ug/l	1	10/16/23	
Barium, Total	52	0.14	1.0	ug/l	1	10/16/23	
Copper, Total	0.29	0.23	0.50	ug/l	1	10/16/23	J
Lead, Total	0.095	0.083	0.20	ug/l	1	10/16/23	J
Manganese, Dissolved	6.3	0.11	1.0	ug/l	1	10/16/23	
Manganese, Total	11	0.23	1.0	ug/l	1	10/16/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW4-S4
3J03146-01 (Water) Sampled: 10/03/23 9:53 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W3J1110		Preparation: EPA 200.2		Prepared: 10/12/23 15:19		Analyst: tyc	
Selenium, Total	4.3	0.067	0.40	ug/l	1	10/16/23	
Strontium, Total	820	0.036	0.20	ug/l	1	10/16/23	

Microbiological Parameters by Standard Methods

Method: SM 9215E			Instr: INC06				
Batch ID: W3J0339		Preparation: _NONE (MICROBIOLOGY)		Prepared: 10/03/23 16:20		Analyst: atd	
Heterotrophic Plate Count	>=740	2.0	2.0	MPN/mL	1	10/05/23	
Method: SM 9221B			Instr: INC12				
Batch ID: W3J0338		Preparation: _NONE (MICROBIOLOGY)		Prepared: 10/03/23 16:32		Analyst: rea	
Total Coliform	13	1.8	1.8	MPN/100mL	1	10/11/23	

Sample Results

(Continued)

Sample: PT-SW4-S4
3J03146-01RE1 (Water) Sampled: 10/03/23 9:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W3J0542		Preparation: _NONE (LC)		Prepared: 10/06/23 08:07		Analyst: CLL	
Sulfate as SO4	290	0.72	1.5	mg/l	3	10/07/23	
Anions by IC, EPA Method 300.1							
Method: EPA 300.1			Instr: LC08_Channel2				
Batch ID: W3J1288		Preparation: _NONE (LC)		Prepared: 10/16/23 09:58		Analyst: CLL	
Bromate	ND	7.0	25	ug/l	5	10/17/23	M-05
Bromide	720	8.5	50	ug/l	5	10/17/23	M-06
<i>Surrogate(s)</i>							
Dichloroacetate	109%	Conc: 544	90-115			10/17/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0542 - EPA 300.0											
Blank (W3J0542-BLK1)					Prepared & Analyzed: 10/06/23						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W3J0542-BS1)					Prepared & Analyzed: 10/06/23						
Chloride, Total	20.9	0.19	0.50	mg/l	20.0		105	90-110			
Fluoride, Total	1.96	0.0090	0.10	mg/l	2.00		98	90-110			
Sulfate as SO4	20.6	0.24	0.50	mg/l	20.0		103	90-110			
Matrix Spike (W3J0542-MS1)					Source: 3118003-01		Prepared: 10/06/23 Analyzed: 10/07/23				
Chloride, Total	383	1.9	5.0	mg/l	200	160	112	76-118			
Fluoride, Total	20.5	0.090	1.0	mg/l	20.0	0.542	100	86-107			
Sulfate as SO4	330	2.4	5.0	mg/l	200	113	109	78-111			
Matrix Spike (W3J0542-MS2)					Source: 3118003-04		Prepared: 10/06/23 Analyzed: 10/07/23				
Chloride, Total	301	1.9	5.0	mg/l	200	87.1	107	76-118			
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.708	100	86-107			
Sulfate as SO4	262	2.4	5.0	mg/l	200	51.4	105	78-111			
Matrix Spike Dup (W3J0542-MSD1)					Source: 3118003-01		Prepared: 10/06/23 Analyzed: 10/07/23				
Chloride, Total	383	1.9	5.0	mg/l	200	160	111	76-118	0.05	20	
Fluoride, Total	20.5	0.090	1.0	mg/l	20.0	0.542	100	86-107	0.1	20	
Sulfate as SO4	330	2.4	5.0	mg/l	200	113	109	78-111	0.05	20	
Matrix Spike Dup (W3J0542-MSD2)					Source: 3118003-04		Prepared: 10/06/23 Analyzed: 10/07/23				
Chloride, Total	302	1.9	5.0	mg/l	200	87.1	107	76-118	0.1	20	
Fluoride, Total	20.3	0.090	1.0	mg/l	20.0	0.708	98	86-107	2	20	
Sulfate as SO4	261	2.4	5.0	mg/l	200	51.4	105	78-111	0.06	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1288 - EPA 300.1											
Blank (W3J1288-BLK1)					Prepared & Analyzed: 10/16/23						
Bromate	ND	1.4	5.0	ug/l							
Bromide	ND	1.7	10	ug/l							
Chlorate	ND	1.7	10	ug/l							
Chlorite	ND	2.2	10	ug/l							
<i>Surrogate(s)</i>											
Dichloroacetate	523			ug/l	500		105	90-115			
LCS (W3J1288-BS1)					Prepared & Analyzed: 10/16/23						
Bromate	101	1.4	5.0	ug/l	100		101	85-115			
Bromide	99.0	1.7	10	ug/l	100		99	85-115			
Chlorate	104	1.7	10	ug/l	100		104	85-115			
Chlorite	103	2.2	10	ug/l	100		103	85-115			
<i>Surrogate(s)</i>											
Dichloroacetate	538			ug/l	500		108	90-115			
Matrix Spike (W3J1288-MS1)					Source: 3114012-02		Prepared: 10/16/23 Analyzed: 10/17/23				
Bromate	57.8	1.4	5.0	ug/l	100	ND	58	64-133			MS-01
Bromide	1270	1.7	10	ug/l	100	1240	31	73-125			MS-02
Chlorate	81.8	1.7	10	ug/l	100	ND	82	76-120			
Chlorite	88.7	2.2	10	ug/l	100	ND	89	78-129			
<i>Surrogate(s)</i>											
Dichloroacetate	460			ug/l	500		92	90-115			
Matrix Spike (W3J1288-MS2)					Source: 3114013-01		Prepared & Analyzed: 10/16/23				
Bromate	145	1.4	5.0	ug/l	100	ND	145	64-133			MS-01
Bromide	426	1.7	10	ug/l	100	368	58	73-125			MS-01
Chlorate	262	1.7	10	ug/l	100	191	71	76-120			MS-01
Chlorite	99.7	2.2	10	ug/l	100	ND	100	78-129			
<i>Surrogate(s)</i>											
Dichloroacetate	515			ug/l	500		103	90-115			
Matrix Spike Dup (W3J1288-MSD1)					Source: 3114012-02		Prepared: 10/16/23 Analyzed: 10/17/23				
Bromate	56.2	1.4	5.0	ug/l	100	ND	56	64-133	3	20	MS-01
Bromide	1270	1.7	10	ug/l	100	1240	28	73-125	0.2	20	MS-02
Chlorate	77.6	1.7	10	ug/l	100	ND	78	76-120	5	20	
Chlorite	89.2	2.2	10	ug/l	100	ND	89	78-129	0.5	20	
<i>Surrogate(s)</i>											
Dichloroacetate	468			ug/l	500		94	90-115			
Matrix Spike Dup (W3J1288-MSD2)					Source: 3114013-01		Prepared & Analyzed: 10/16/23				
Bromate	133	1.4	5.0	ug/l	100	ND	133	64-133	9	20	
Bromide	416	1.7	10	ug/l	100	368	48	73-125	2	20	MS-01
Chlorate	259	1.7	10	ug/l	100	191	68	76-120	1	20	MS-01
Chlorite	88.2	2.2	10	ug/l	100	ND	88	78-129	12	20	
<i>Surrogate(s)</i>											



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.1 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J1288 - EPA 300.1 (Continued)											
Matrix Spike Dup (W3J1288-MSD2)			Source: 3114013-01			Prepared & Analyzed: 10/16/23					
<i>Surrogate(s)</i>	-----										
Dichloroacetate	465			ug/l	500		93	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0263 - EPA 140.1											
Blank (W3J0263-BLK1)											
Threshold Odor Number	1.0		1.0	T.O.N.							J
Prepared & Analyzed: 10/03/23											
Duplicate (W3J0263-DUP1)											
Threshold Odor Number	1.0		1.0	T.O.N.		1.0			0	20	J
Source: 3J03072-03											
Prepared & Analyzed: 10/03/23											
Duplicate (W3J0263-DUP2)											
Threshold Odor Number	1.0		1.0	T.O.N.		1.0			0	20	J
Source: 3J03072-04											
Prepared & Analyzed: 10/03/23											
Batch: W3J0291 - SM 2120B											
LCS (W3J0291-BS1)											
Color	10.0		3.0	Color Units	10.0		100	95-105			
Prepared & Analyzed: 10/04/23											
Duplicate (W3J0291-DUP1)											
Color	ND		3.0	Color Units		ND				10	
Source: 3J03103-22											
Prepared & Analyzed: 10/04/23											
Duplicate (W3J0291-DUP2)											
Color	ND		3.0	Color Units		ND				10	
Source: 3J03103-23											
Prepared & Analyzed: 10/04/23											
Batch: W3J0296 - SM 2320B											
Blank (W3J0296-BLK1)											
Alkalinity as CaCO3	ND	7.2	20	mg/l							
Prepared & Analyzed: 10/04/23											
LCS (W3J0296-BS1)											
Alkalinity as CaCO3	188	7.2	20	mg/l		186	101	94-108			
Prepared & Analyzed: 10/04/23											
Duplicate (W3J0296-DUP1)											
Alkalinity as CaCO3	144	7.2	20	mg/l		155			7	15	
Source: 3I28006-01											
Prepared & Analyzed: 10/04/23											
Batch: W3J0373 - EPA 353.2											
Blank (W3J0373-BLK1)											
Nitrate as N	ND	0.040	0.15	mg/l							
Nitrite as N	ND	42	100	ug/l							
Prepared & Analyzed: 10/04/23											
LCS (W3J0373-BS1)											
Nitrate as N	1.07	0.040	0.15	mg/l		1.00	107	90-110			
Nitrite as N	1030	42	100	ug/l		1000	103	90-110			
Prepared & Analyzed: 10/04/23											
Matrix Spike (W3J0373-MS1)											
Nitrate as N	8.57	0.040	0.15	mg/l		2.00	6.51	103	90-110		
Nitrite as N	1050	42	100	ug/l		1000	ND	105	90-110		
Source: 3J03099-19											
Prepared & Analyzed: 10/04/23											
Matrix Spike (W3J0373-MS2)											
Nitrate as N	6.96	0.040	0.15	mg/l		2.00	4.80	108	90-110		
Nitrite as N	1050	42	100	ug/l		1000	ND	105	90-110		
Source: 3J03108-07											
Prepared & Analyzed: 10/04/23											
Matrix Spike Dup (W3J0373-MSD1)											
Nitrate as N	8.59	0.040	0.15	mg/l		2.00	6.51	104	90-110	0.2	20
Nitrite as N	1040	42	100	ug/l		1000	ND	104	90-110	1	20
Source: 3J03099-19											
Prepared & Analyzed: 10/04/23											
Matrix Spike Dup (W3J0373-MSD2)											
Nitrate as N	6.95	0.040	0.15	mg/l		2.00	4.80	108	90-110	0.1	20
Source: 3J03108-07											
Prepared & Analyzed: 10/04/23											

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0373 - EPA 353.2 (Continued)											
Matrix Spike Dup (W3J0373-MSD2) Source: 3J03108-07 Prepared & Analyzed: 10/04/23											
Nitrite as N	1050	42	100	ug/l	1000	ND	105	90-110	0	20	
Batch: W3J0392 - SM 4500H+-B											
LCS (W3J0392-BS1) Prepared & Analyzed: 10/04/23											
pH	6.94	0.10	0.10	pH Units	6.86		101	98.8-101			
Duplicate (W3J0392-DUP1) Source: 3I08003-06 Prepared & Analyzed: 10/04/23											
pH	7.62	0.10	0.10	pH Units	7.40				3	3.1	
Batch: W3J0395 - SM 2540C											
Blank (W3J0395-BLK1) Prepared: 10/04/23 Analyzed: 10/05/23											
Total Dissolved Solids	ND	4.0	10	mg/l							
LCS (W3J0395-BS1) Prepared: 10/04/23 Analyzed: 10/05/23											
Total Dissolved Solids	827	4.0	10	mg/l	824		100	97-103			
Duplicate (W3J0395-DUP1) Source: 3J03139-01 Prepared: 10/04/23 Analyzed: 10/05/23											
Total Dissolved Solids	35600	4.0	10	mg/l	35700				0.3	10	
Duplicate (W3J0395-DUP2) Source: 3J04103-01 Prepared: 10/04/23 Analyzed: 10/05/23											
Total Dissolved Solids	1710	4.0	10	mg/l	1680				2	10	
Batch: W3J1122 - EPA 350.1											
Blank (W3J1122-BLK1) Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W3J1122-BLK2) Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W3J1122-BS1) Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	0.256	0.017	0.10	mg/l	0.250		102	90-110			
LCS (W3J1122-BS2) Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	0.245	0.017	0.10	mg/l	0.250		98	90-110			
Matrix Spike (W3J1122-MS1) Source: 3J06036-03 Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	1.60	0.017	0.10	mg/l	0.250	1.36	97	90-110			
Matrix Spike (W3J1122-MS2) Source: 3J06117-01 Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	0.272	0.017	0.10	mg/l	0.250	0.0290	97	90-110			
Matrix Spike Dup (W3J1122-MSD1) Source: 3J06036-03 Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	1.60	0.017	0.10	mg/l	0.250	1.36	98	90-110	0.2	15	
Matrix Spike Dup (W3J1122-MSD2) Source: 3J06117-01 Prepared: 10/12/23 Analyzed: 10/13/23											
Ammonia as N	0.272	0.017	0.10	mg/l	0.250	0.0290	97	90-110	0.04	15	
Batch: W3J1143 - EPA 365.3											
Blank (W3J1143-BLK1) Prepared: 10/12/23 Analyzed: 10/23/23											
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W3J1143-BS1) Prepared: 10/12/23 Analyzed: 10/23/23											
Phosphorus as PO4, Total	0.611	0.021	0.030	mg/l	0.612		100	90-110			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1143 - EPA 365.3 (Continued)											
Matrix Spike (W3J1143-MS1) Source: 3J03095-02 Prepared: 10/12/23 Analyzed: 10/23/23											
Phosphorus as PO ₄ , Total	0.998	0.021	0.030	mg/l	0.612	0.357	105	90-110			
Matrix Spike Dup (W3J1143-MSD1) Source: 3J03095-02 Prepared: 10/12/23 Analyzed: 10/23/23											
Phosphorus as PO ₄ , Total	0.962	0.021	0.030	mg/l	0.612	0.357	99	90-110	4	20	

Quality Control Results

(Continued)

Hexavalent Chromium by IC

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1089 - EPA 218.6											
Blank (W3J1089-BLK1) Prepared & Analyzed: 10/12/23											
Chromium 6+	ND	0.0079	0.020	ug/l							
LCS (W3J1089-BS1) Prepared & Analyzed: 10/12/23											
Chromium 6+	5.32	0.0079	0.020	ug/l	5.00		106	90-110			
Matrix Spike (W3J1089-MS1) Source: 3J11052-04 Prepared & Analyzed: 10/12/23											
Chromium 6+	5.32	0.0079	0.020	ug/l	5.00	0.139	104	88-112			
Matrix Spike Dup (W3J1089-MSD1) Source: 3J11052-04 Prepared & Analyzed: 10/12/23											
Chromium 6+	5.42	0.0079	0.020	ug/l	5.00	0.139	106	88-112	2	10	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1108 - EPA 200.7											
Blank (W3J1108-BLK1)											
					Prepared: 10/12/23 Analyzed: 10/17/23						
Boron, Total	ND	3.0	10	ug/l							
Calcium, Total	ND	0.0240	0.500	mg/l							
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Magnesium, Total	ND	0.0390	0.500	mg/l							
Potassium, Total	ND	0.086	0.50	mg/l							
Silica as SiO2, Dissolved	ND	0.0086	0.10	mg/l							
Silica as SiO2, Total	0.00875	0.0086	0.10	mg/l							J
Sodium, Total	ND	0.13	1.0	mg/l							
LCS (W3J1108-BS1)											
					Prepared: 10/12/23 Analyzed: 10/17/23						
Boron, Total	214	3.0	10	ug/l	200		107	85-115			
Calcium, Total	48.2	0.0240	0.500	mg/l	50.2		96	85-115			
Iron, Dissolved	216	5.0	30	ug/l	200		108	85-115			
Iron, Total	0.216	0.0065	0.030	mg/l	0.200		108	85-115			
Magnesium, Total	47.9	0.0390	0.500	mg/l	50.2		95	85-115			
Potassium, Total	54.9	0.086	0.50	mg/l	52.0		106	85-115			
Silica as SiO2, Dissolved	43.1	0.0086	0.10	mg/l	43.2		100	85-115			
Silica as SiO2, Total	43.1	0.0086	0.10	mg/l	43.2		100	85-115			
Sodium, Total	47.5	0.13	1.0	mg/l	50.2		95	85-115			
Matrix Spike (W3J1108-MS1)											
					Prepared: 10/12/23 Analyzed: 10/17/23						
Source: 3129019-01											
Boron, Total	428	3.0	10	ug/l	200	207	111	70-130			
Calcium, Total	88.0	0.0240	0.500	mg/l	50.2	40.3	95	70-130			
Iron, Dissolved	220	5.0	30	ug/l	200	ND	110	70-130			
Iron, Total	0.220	0.0065	0.030	mg/l	0.200	ND	110	70-130			
Magnesium, Total	60.1	0.0390	0.500	mg/l	50.2	11.8	96	70-130			
Potassium, Total	60.9	0.086	0.50	mg/l	52.0	2.59	112	70-130			
Silica as SiO2, Dissolved	60.0	0.0086	0.10	mg/l	43.2	16.7	100	70-130			
Silica as SiO2, Total	60.0	0.0086	0.10	mg/l	43.2	16.7	100	70-130			
Sodium, Total	106	0.13	1.0	mg/l	50.2	56.3	99	70-130			
Matrix Spike (W3J1108-MS2)											
					Prepared: 10/12/23 Analyzed: 10/17/23						
Source: 3129019-10											
Boron, Total	760	3.0	10	ug/l	200	532	114	70-130			
Calcium, Total	70.8	0.0240	0.500	mg/l	50.2	21.9	97	70-130			
Iron, Dissolved	226	5.0	30	ug/l	200	7.19	109	70-130			
Iron, Total	0.226	0.0065	0.030	mg/l	0.200	0.00719	109	70-130			
Magnesium, Total	53.8	0.0390	0.500	mg/l	50.2	4.87	98	70-130			
Potassium, Total	59.1	0.086	0.50	mg/l	52.0	0.847	112	70-130			
Silica as SiO2, Dissolved	49.1	0.0086	0.10	mg/l	43.2	4.31	104	70-130			
Silica as SiO2, Total	49.1	0.0086	0.10	mg/l	43.2	4.31	104	70-130			
Sodium, Total	76.1	0.13	1.0	mg/l	50.2	26.1	100	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1108 - EPA 200.7 (Continued)											
Matrix Spike (W3J1108-MS2)			Source: 3I29019-10			Prepared: 10/12/23 Analyzed: 10/17/23					
Matrix Spike Dup (W3J1108-MSD1)											
Source: 3I29019-01			Prepared: 10/12/23 Analyzed: 10/17/23								
Boron, Total	425	3.0	10	ug/l	200	207	109	70-130	0.7	30	
Calcium, Total	87.7	0.0240	0.500	mg/l	50.2	40.3	95	70-130	0.3	30	
Iron, Dissolved	220	5.0	30	ug/l	200	ND	110	70-130	0.1	30	
Iron, Total	0.220	0.0065	0.030	mg/l	0.200	ND	110	70-130	0.1	30	
Magnesium, Total	59.9	0.0390	0.500	mg/l	50.2	11.8	96	70-130	0.5	30	
Potassium, Total	60.5	0.086	0.50	mg/l	52.0	2.59	111	70-130	0.6	30	
Silica as SiO2, Dissolved	60.1	0.0086	0.10	mg/l	43.2	16.7	101	70-130	0.3	30	
Silica as SiO2, Total	60.1	0.0086	0.10	mg/l	43.2	16.7	101	70-130	0.3	30	
Sodium, Total	106	0.13	1.0	mg/l	50.2	56.3	99	70-130	0.4	30	
Matrix Spike Dup (W3J1108-MSD2)											
Source: 3I29019-10			Prepared: 10/12/23 Analyzed: 10/17/23								
Boron, Total	757	3.0	10	ug/l	200	532	113	70-130	0.3	30	
Calcium, Total	71.0	0.0240	0.500	mg/l	50.2	21.9	98	70-130	0.2	30	
Iron, Dissolved	230	5.0	30	ug/l	200	7.19	111	70-130	2	30	
Iron, Total	0.230	0.0065	0.030	mg/l	0.200	0.00719	111	70-130	2	30	
Magnesium, Total	54.0	0.0390	0.500	mg/l	50.2	4.87	98	70-130	0.4	30	
Potassium, Total	59.3	0.086	0.50	mg/l	52.0	0.847	112	70-130	0.3	30	
Silica as SiO2, Dissolved	49.4	0.0086	0.10	mg/l	43.2	4.31	104	70-130	0.6	30	
Silica as SiO2, Total	49.4	0.0086	0.10	mg/l	43.2	4.31	104	70-130	0.6	30	
Sodium, Total	76.3	0.13	1.0	mg/l	50.2	26.1	100	70-130	0.2	30	
Batch: W3J1110 - EPA 200.8											
Blank (W3J1110-BLK1)			Prepared: 10/12/23 Analyzed: 10/16/23								
Aluminum, Total	ND	4.4	20	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W3J1110-BS1)											
Prepared: 10/12/23 Analyzed: 10/16/23											
Aluminum, Total	56.2	4.4	20	ug/l	50.0		112	85-115			
Arsenic, Total	53.3	0.074	0.40	ug/l	50.0		107	85-115			
Barium, Total	50.7	0.14	1.0	ug/l	50.0		101	85-115			
Copper, Total	54.9	0.23	0.50	ug/l	50.0		110	85-115			
Lead, Total	50.8	0.083	0.20	ug/l	50.0		101	85-115			
Manganese, Dissolved	53.5	0.11	1.0	ug/l	50.0		107	85-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J1110 - EPA 200.8 (Continued)										
LCS (W3J1110-BS1)					Prepared: 10/12/23 Analyzed: 10/16/23					
Manganese, Total	53.5	0.23	1.0	ug/l	50.0		107 85-115			
Selenium, Total	51.1	0.067	0.40	ug/l	50.0		102 85-115			
Strontium, Total	50.9	0.036	0.20	ug/l	50.0		102 85-115			
Matrix Spike (W3J1110-MS1)					Source: 3129019-03 Prepared: 10/12/23 Analyzed: 10/16/23					
Aluminum, Total	82.6	4.4	20	ug/l	50.0	28.7	108 70-130			
Arsenic, Total	53.6	0.074	0.40	ug/l	50.0	0.724	106 70-130			
Barium, Total	73.9	0.14	1.0	ug/l	50.0	21.8	104 70-130			
Copper, Total	65.1	0.23	0.50	ug/l	50.0	11.6	107 70-130			
Lead, Total	50.8	0.083	0.20	ug/l	50.0	ND	101 70-130			
Manganese, Dissolved	58.4	0.11	1.0	ug/l	50.0	5.15	106 70-130			
Manganese, Total	58.4	0.23	1.0	ug/l	50.0	5.15	106 70-130			
Selenium, Total	50.4	0.067	0.40	ug/l	50.0	0.166	100 70-130			
Strontium, Total	495	0.036	0.20	ug/l	50.0	437	116 70-130			
Matrix Spike (W3J1110-MS2)					Source: 3129019-07 Prepared: 10/12/23 Analyzed: 10/16/23					
Aluminum, Total	84.5	4.4	20	ug/l	50.0	31.9	105 70-130			
Arsenic, Total	53.0	0.074	0.40	ug/l	50.0	1.00	104 70-130			
Barium, Total	66.7	0.14	1.0	ug/l	50.0	16.2	101 70-130			
Copper, Total	60.2	0.23	0.50	ug/l	50.0	7.97	104 70-130			
Lead, Total	50.8	0.083	0.20	ug/l	50.0	ND	102 70-130			
Manganese, Dissolved	52.9	0.11	1.0	ug/l	50.0	0.670	104 70-130			
Manganese, Total	52.9	0.23	1.0	ug/l	50.0	0.670	104 70-130			
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	0.329	99 70-130			
Strontium, Total	373	0.036	0.20	ug/l	50.0	329	88 70-130			
Matrix Spike Dup (W3J1110-MSD1)					Source: 3129019-03 Prepared: 10/12/23 Analyzed: 10/16/23					
Aluminum, Total	82.7	4.4	20	ug/l	50.0	28.7	108 70-130	0.2	30	
Arsenic, Total	53.4	0.074	0.40	ug/l	50.0	0.724	105 70-130	0.4	30	
Barium, Total	73.2	0.14	1.0	ug/l	50.0	21.8	103 70-130	0.9	30	
Copper, Total	64.3	0.23	0.50	ug/l	50.0	11.6	105 70-130	1	30	
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101 70-130	0.7	30	
Manganese, Dissolved	58.4	0.11	1.0	ug/l	50.0	5.15	106 70-130	0.07	30	
Manganese, Total	58.4	0.23	1.0	ug/l	50.0	5.15	106 70-130	0.07	30	
Selenium, Total	50.4	0.067	0.40	ug/l	50.0	0.166	100 70-130	0.03	30	
Strontium, Total	505	0.036	0.20	ug/l	50.0	437	136 70-130	2	30	MS-02
Matrix Spike Dup (W3J1110-MSD2)					Source: 3129019-07 Prepared: 10/12/23 Analyzed: 10/16/23					
Aluminum, Total	84.5	4.4	20	ug/l	50.0	31.9	105 70-130	0.005	30	
Arsenic, Total	53.5	0.074	0.40	ug/l	50.0	1.00	105 70-130	1	30	
Barium, Total	66.7	0.14	1.0	ug/l	50.0	16.2	101 70-130	0.03	30	
Copper, Total	60.8	0.23	0.50	ug/l	50.0	7.97	106 70-130	1	30	
Lead, Total	51.2	0.083	0.20	ug/l	50.0	ND	102 70-130	0.7	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W3J1110 - EPA 200.8 (Continued)												
Matrix Spike Dup (W3J1110-MSD2)			Source: 3129019-07			Prepared: 10/12/23			Analyzed: 10/16/23			
Manganese, Dissolved	54.3	0.11	1.0	ug/l	50.0	0.670	107	70-130	3	30		
Manganese, Total	54.3	0.23	1.0	ug/l	50.0	0.670	107	70-130	3	30		
Selenium, Total	50.1	0.067	0.40	ug/l	50.0	0.329	100	70-130	0.7	30		
Strontium, Total	378	0.036	0.20	ug/l	50.0	329	98	70-130	1	30		

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W3J0338 - SM 9221B												
Blank (W3J0338-BLK1)						Prepared: 10/03/23			Analyzed: 10/11/23			
Total Coliform	ND	1.8	1.8	MPN/100m L								

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:11

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
>=740	>=740
J	Estimated conc. detected <MRL and >MDL.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: ~~3103145~~ ¹⁴⁴ 3503146

WKO Logged by: Lester Abad

Samples Checked by: Jerico Bolotano

Date/Time Received: 10/03/23 @ 15:30

of Samples: 01

Delivered by: RMS

Task	Yes	No	N/A	Comments
------	-----	----	-----	----------

COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Project Manager notified about COC discrepancy?

Sample Temperature 18.6°C

Samples received on ice?

Ice Type (Blue/Wet) BLUE

All samples intact?

Samples in proper containers?

Sufficient sample volume?

Samples intact?

Received within holding time?

Project Manager notified about receipt info?

Sample labels checked for correct preservation?

VOC Headspace: (No) none, if Yes (see comment)

524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT

<6mm/Pea Size?

pH verified upon receipt?

Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3.5-9

pH paper Lot# 3082367

Free Chlorine Tested <0.1 (Organics Analyses)

CI Test Strip Lot# 11032201

OR&G pH <2 verified?

pH adjusted for OR&G

Project Manager notified about sample preservation?

pH paper Lot#

pH Reading:

Acid Lot#

Anti-added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Lester Abad*

Date: 10/03/23

Work Orders: 3J03147

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/07/2023

Received Date: 10/03/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

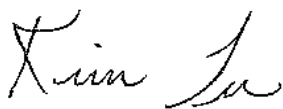
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/03/23 with the Chain-of-Custody document. The samples were received in good condition, at 18.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
Storm Drain	Client	3J03147-01	Water	10/03/23 08:55	
Storm Drain 2	Client	3J03147-02	Water	10/03/23 11:00	
Storm Drain 3	Client	3J03147-03	Water	10/03/23 13:00	
PT-SW4-S4	Client	3J03147-04	Water	10/03/23 13:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Sample Results

Sample: Storm Drain Sampled: 10/03/23 8:55 by Client
 3J03147-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J0666		Preparation: EPA 508.1/SPE			Prepared: 10/09/23 08:49		Analyst: ajc
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/01/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/01/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/01/23	
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/01/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/01/23	
Aroclor 1016	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1221	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1232	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1242	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1248	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1254	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1260	ND	0.10	0.10	ug/l	1	11/01/23	R-01
beta-BHC	ND	0.0045	0.010	ug/l	1	11/01/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/01/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/01/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/01/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/01/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/01/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/01/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/01/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/01/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/01/23	
Heptachlor	ND	0.0031	0.010	ug/l	1	11/01/23	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/01/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/01/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/01/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain
3J03147-01 (Water) Sampled: 10/03/23 8:55 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08					
Batch ID: W3J0666	Preparation: EPA 508.1/SPE	Prepared: 10/09/23 08:49		Analyst: ajc			
Kepone	ND	0.038	0.20	ug/l	1	11/01/23	
Methoxychlor	ND	0.0030	0.010	ug/l	1	11/01/23	
Mirex	ND	0.0030	0.010	ug/l	1	11/01/23	
PCBs, Total	ND	0.10	0.50	ug/l	1	11/01/23	R-01
Propachlor	ND	0.045	0.20	ug/l	1	11/01/23	
Toxaphene	ND	0.37	1.0	ug/l	1	11/01/23	
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/01/23	
Trifluralin	ND	0.0043	0.010	ug/l	1	11/01/23	

Surrogate(s)

4,4-Dibromobiphenyl	95%	Conc: 0.0931	70-130			11/01/23	
---------------------	-----	--------------	--------	--	--	----------	--

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15					
Batch ID: W3J0602	Preparation: _NONE (WETCHEM)	Prepared: 10/06/23 12:29		Analyst: mes			
Total Suspended Solids	ND		5	mg/l	1	10/06/23	

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06					
Batch ID: W3J0575	Preparation: EPA 200.2	Prepared: 10/06/23 15:12		Analyst: tyc			
Cadmium, Total	ND	0.042	0.20	ug/l	1	10/10/23	
Copper, Total	ND	0.23	0.50	ug/l	1	10/10/23	
Lead, Total	ND	0.083	0.20	ug/l	1	10/10/23	
Silver, Total	ND	0.055	0.20	ug/l	1	10/10/23	
Zinc, Total	ND	1.7	10	ug/l	1	10/10/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12					
Batch ID: W3J0338	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/03/23 16:32		Analyst: rea			
Total Coliform	ND	1.8	1.8	MPN/100mL	1	10/11/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08					
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06		Analyst: ADM			
Tert-butyl alcohol	ND	0.45	2.0	ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	89%	Conc: 44.6	70-130			10/07/23	
4-Bromofluorobenzene	84%	Conc: 42.2	70-130			10/07/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/07/2023 17:13

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 2
 3J03147-02 (Water) Sampled: 10/03/23 11:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J0666		Preparation: EPA 508.1/SPE		Prepared: 10/09/23 08:49		Analyst: ajc	
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/01/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/01/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/01/23	
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/01/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/01/23	
Aroclor 1016	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1221	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1232	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1242	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1248	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1254	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1260	ND	0.10	0.10	ug/l	1	11/01/23	R-01
beta-BHC	ND	0.0045	0.010	ug/l	1	11/01/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/01/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/01/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/01/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/01/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/01/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/01/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/01/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/01/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/01/23	
Heptachlor	ND	0.0031	0.010	ug/l	1	11/01/23	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/01/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/01/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/01/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/07/2023 17:13

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 2
3J03147-02 (Water) Sampled: 10/03/23 11:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08					
Batch ID: W3J0666	Preparation: EPA 508.1/SPE	Prepared: 10/09/23 08:49		Analyst: ajc			
Kepone	ND	0.038	0.20	ug/l	1	11/01/23	
Methoxychlor	ND	0.0030	0.010	ug/l	1	11/01/23	
Mirex	ND	0.0030	0.010	ug/l	1	11/01/23	
PCBs, Total	ND	0.10	0.50	ug/l	1	11/01/23	R-01
Propachlor	ND	0.045	0.20	ug/l	1	11/01/23	
Toxaphene	ND	0.37	1.0	ug/l	1	11/01/23	
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/01/23	
Trifluralin	ND	0.0043	0.010	ug/l	1	11/01/23	

Surrogate(s)

4,4-Dibromobiphenyl	105%	Conc: 0.101	70-130			11/01/23	
---------------------	------	-------------	--------	--	--	----------	--

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15					
Batch ID: W3J0602	Preparation: _NONE (WETCHEM)	Prepared: 10/06/23 12:29		Analyst: mes			
Total Suspended Solids	0.1		5	mg/l	1	10/06/23	J

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06					
Batch ID: W3J0575	Preparation: EPA 200.2	Prepared: 10/06/23 15:12		Analyst: tyc			
Cadmium, Total	ND	0.042	0.20	ug/l	1	10/10/23	
Copper, Total	ND	0.23	0.50	ug/l	1	10/10/23	
Lead, Total	ND	0.083	0.20	ug/l	1	10/10/23	
Silver, Total	ND	0.055	0.20	ug/l	1	10/10/23	
Zinc, Total	ND	1.7	10	ug/l	1	10/10/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12					
Batch ID: W3J0338	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/03/23 16:32		Analyst: rea			
Total Coliform	ND	1.8	1.8	MPN/100mL	1	10/11/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08					
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06		Analyst: ADM			
Tert-butyl alcohol	ND	0.45	2.0	ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 46.2	70-130			10/07/23	
4-Bromofluorobenzene	90%	Conc: 45.0	70-130			10/07/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 3
3J03147-03 (Water) Sampled: 10/03/23 13:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J0666		Preparation: EPA 508.1/SPE		Prepared: 10/09/23 08:49		Analyst: ajc	
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/01/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/01/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/01/23	
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/01/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/01/23	
Aroclor 1016	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1221	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1232	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1242	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1248	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1254	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1260	ND	0.10	0.10	ug/l	1	11/01/23	R-01
beta-BHC	ND	0.0045	0.010	ug/l	1	11/01/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/01/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/01/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/01/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/01/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/01/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/01/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/01/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/01/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/01/23	
Heptachlor	ND	0.010	0.010	ug/l	1	11/01/23	R-01
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/01/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/01/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/01/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/07/2023 17:13

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 3
3J03147-03 (Water) Sampled: 10/03/23 13:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08					
Batch ID: W3J0666	Preparation: EPA 508.1/SPE	Prepared: 10/09/23 08:49		Analyst: ajc			
Kepone	ND	0.038	0.20	ug/l	1	11/01/23	
Methoxychlor	ND	0.0030	0.010	ug/l	1	11/01/23	
Mirex	ND	0.0030	0.010	ug/l	1	11/01/23	
PCBs, Total	ND	0.10	0.50	ug/l	1	11/01/23	R-01
Propachlor	ND	0.045	0.20	ug/l	1	11/01/23	
Toxaphene	ND	0.37	1.0	ug/l	1	11/01/23	
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/01/23	
Trifluralin	ND	0.0043	0.010	ug/l	1	11/01/23	

Surrogate(s)

4,4-Dibromobiphenyl	72%	Conc: 0.0708	70-130	11/01/23
---------------------	-----	--------------	--------	----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15					
Batch ID: W3J0602	Preparation: _NONE (WETCHEM)	Prepared: 10/06/23 12:29		Analyst: mes			
Total Suspended Solids	ND	5	mg/l	1	10/06/23		

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06					
Batch ID: W3J0575	Preparation: EPA 200.2	Prepared: 10/06/23 15:12		Analyst: tyc			
Cadmium, Total	ND	0.042	0.20	ug/l	1	10/10/23	
Copper, Total	ND	0.23	0.50	ug/l	1	10/10/23	
Lead, Total	ND	0.083	0.20	ug/l	1	10/10/23	
Silver, Total	ND	0.055	0.20	ug/l	1	10/10/23	
Zinc, Total	ND	1.7	10	ug/l	1	10/10/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12					
Batch ID: W3J0338	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/03/23 16:32		Analyst: rea			
Total Coliform	ND	1.8	1.8	MPN/100mL	1	10/11/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08					
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06		Analyst: ADM			
Tert-butyl alcohol	ND	0.45	2.0	ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 45.8	70-130	10/07/23
4-Bromofluorobenzene	91%	Conc: 45.5	70-130	10/07/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-SW4-S4
 3J03147-04 (Water) Sampled: 10/03/23 13:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B				Instr: TOC02			
Batch ID: W3J1251		Preparation: _NONE (TOC/TOX)		Prepared: 10/13/23 14:59		Analyst: rem	
Total Organic Carbon (TOC)	0.39	0.19	0.30	mg/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Quality Control Results

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W3J0666 - EPA 508.1												
Blank (W3J0666-BLK1)						Prepared: 10/09/23 Analyzed: 10/31/23						
2,4'-DDD	ND	0.0030	0.010	ug/l								
2,4'-DDE	ND	0.0030	0.010	ug/l								
2,4'-DDT	ND	0.0030	0.010	ug/l								
4,4'-DDD	ND	0.0030	0.010	ug/l								
4,4'-DDE	ND	0.0040	0.010	ug/l								
4,4'-DDT	ND	0.0030	0.010	ug/l								
Alachlor	ND	0.026	0.20	ug/l								
Aldrin	ND	0.0040	0.010	ug/l								
alpha-BHC	ND	0.0015	0.010	ug/l								
alpha-Chlordane	ND	0.0031	0.010	ug/l								
Aroclor 1016	ND	0.048	0.10	ug/l								
Aroclor 1221	ND	0.044	0.10	ug/l								
Aroclor 1232	ND	0.064	0.10	ug/l								
Aroclor 1242	ND	0.070	0.10	ug/l								
Aroclor 1248	ND	0.049	0.10	ug/l								
Aroclor 1254	ND	0.068	0.10	ug/l								
Aroclor 1260	ND	0.076	0.10	ug/l								
beta-BHC	ND	0.0045	0.010	ug/l								
Chlordane (tech)	ND	0.067	0.10	ug/l								
Chlorothalonil	ND	0.0040	0.050	ug/l								
cis-Nonachlor	ND	0.0030	0.010	ug/l								
delta-BHC	ND	0.0030	0.010	ug/l								
Dieldrin	ND	0.0030	0.010	ug/l								
Endosulfan I	ND	0.0030	0.010	ug/l								
Endosulfan II	ND	0.0019	0.010	ug/l								
Endosulfan sulfate	ND	0.0030	0.010	ug/l								
Endrin	ND	0.0030	0.010	ug/l								
Endrin aldehyde	ND	0.0040	0.010	ug/l								
Endrin ketone	ND	0.0042	0.010	ug/l								
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l								
gamma-Chlordane	ND	0.0074	0.010	ug/l								
Heptachlor	ND	0.0031	0.010	ug/l								
Heptachlor epoxide	ND	0.0019	0.010	ug/l								
Hexachlorobenzene	ND	0.0019	0.050	ug/l								
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l								
Kepone	ND	0.038	0.20	ug/l								
Methoxychlor	ND	0.0030	0.010	ug/l								
Mirex	ND	0.0030	0.010	ug/l								
PCBs, Total	ND	0.048	0.50	ug/l								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0666 - EPA 508.1 (Continued)											
Blank (W3J0666-BLK1)					Prepared: 10/09/23 Analyzed: 10/31/23						
Propachlor	ND	0.045	0.20	ug/l							
Toxaphene	ND	0.37	1.0	ug/l							
trans-Nonachlor	ND	0.0020	0.010	ug/l							
Trifluralin	ND	0.0043	0.010	ug/l							
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.126			ug/l	0.100		126	70-130			
LCS (W3J0666-BS1)					Prepared: 10/09/23 Analyzed: 10/31/23						
4,4'-DDD	0.102	0.0030	0.010	ug/l	0.100		102	70-130			
4,4'-DDE	0.0918	0.0040	0.010	ug/l	0.100		92	70-130			
4,4'-DDT	0.0932	0.0030	0.010	ug/l	0.100		93	70-130			
Aldrin	0.0938	0.0040	0.010	ug/l	0.100		94	70-130			
alpha-BHC	0.0983	0.0015	0.010	ug/l	0.100		98	70-130			
alpha-Chlordane	0.101	0.0031	0.010	ug/l	0.100		101	70-130			
beta-BHC	0.0944	0.0045	0.010	ug/l	0.100		94	70-130			
delta-BHC	0.0962	0.0030	0.010	ug/l	0.100		96	70-130			
Dieldrin	0.0930	0.0030	0.010	ug/l	0.100		93	70-130			
Endosulfan I	0.0862	0.0030	0.010	ug/l	0.100		86	70-130			
Endosulfan II	0.0924	0.0019	0.010	ug/l	0.100		92	70-130			
Endosulfan sulfate	0.109	0.0030	0.010	ug/l	0.100		109	70-130			
Endrin	0.0842	0.0030	0.010	ug/l	0.100		84	70-130			
Endrin aldehyde	0.0791	0.0040	0.010	ug/l	0.100		79	70-130			
Endrin ketone	0.113	0.0042	0.010	ug/l	0.100		113	70-130			
gamma-BHC (Lindane)	0.0975	0.0030	0.010	ug/l	0.100		97	70-130			
gamma-Chlordane	0.103	0.0074	0.010	ug/l	0.100		103	70-130			
Heptachlor	0.0963	0.0031	0.010	ug/l	0.100		96	70-130			
Heptachlor epoxide	0.101	0.0019	0.010	ug/l	0.100		101	70-130			
Methoxychlor	0.103	0.0030	0.010	ug/l	0.100		103	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.112			ug/l	0.100		112	70-130			
LCS (W3J0666-BS2)					Prepared: 10/09/23 Analyzed: 10/31/23						
Aroclor 1016	1.24	0.048	0.10	ug/l	1.00		124	70-130			
Aroclor 1260	0.970	0.076	0.10	ug/l	1.00		97	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.115			ug/l	0.100		115	70-130			
LCS Dup (W3J0666-BSD1)					Prepared: 10/09/23 Analyzed: 10/31/23						
4,4'-DDD	0.103	0.0030	0.010	ug/l	0.100		103	70-130	0.9	30	
4,4'-DDE	0.0909	0.0040	0.010	ug/l	0.100		91	70-130	1	30	
4,4'-DDT	0.0935	0.0030	0.010	ug/l	0.100		93	70-130	0.4	30	
Aldrin	0.0942	0.0040	0.010	ug/l	0.100		94	70-130	0.4	30	
alpha-BHC	0.102	0.0015	0.010	ug/l	0.100		102	70-130	4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W3J0666 - EPA 508.1 (Continued)												
LCS Dup (W3J0666-BS1)												
						Prepared: 10/09/23 Analyzed: 10/31/23						
alpha-Chlordane	0.103	0.0031	0.010	ug/l	0.100		103	70-130	2	30		
beta-BHC	0.0973	0.0045	0.010	ug/l	0.100		97	70-130	3	30		
delta-BHC	0.0967	0.0030	0.010	ug/l	0.100		97	70-130	0.5	30		
Dieldrin	0.0950	0.0030	0.010	ug/l	0.100		95	70-130	2	30		
Endosulfan I	0.0893	0.0030	0.010	ug/l	0.100		89	70-130	4	30		
Endosulfan II	0.0945	0.0019	0.010	ug/l	0.100		94	70-130	2	30		
Endosulfan sulfate	0.108	0.0030	0.010	ug/l	0.100		108	70-130	0.9	30		
Endrin	0.0966	0.0030	0.010	ug/l	0.100		97	70-130	14	30		
Endrin aldehyde	0.0882	0.0040	0.010	ug/l	0.100		88	70-130	11	30		
Endrin ketone	0.111	0.0042	0.010	ug/l	0.100		111	70-130	2	30		
gamma-BHC (Lindane)	0.101	0.0030	0.010	ug/l	0.100		101	70-130	4	30		
gamma-Chlordane	0.105	0.0074	0.010	ug/l	0.100		105	70-130	2	30		
Heptachlor	0.0998	0.0031	0.010	ug/l	0.100		100	70-130	4	30		
Heptachlor epoxide	0.105	0.0019	0.010	ug/l	0.100		105	70-130	4	30		
Methoxychlor	0.104	0.0030	0.010	ug/l	0.100		104	70-130	1	30		
<i>Surrogate(s)</i>												
4,4-Dibromobiphenyl	0.115			ug/l	0.100		115	70-130				

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0602 - SM 2540D											
Blank (W3J0602-BLK1) Prepared & Analyzed: 10/06/23											
Total Suspended Solids	1.00		5	mg/l							J
LCS (W3J0602-BS1) Prepared & Analyzed: 10/06/23											
Total Suspended Solids	67.0		5	mg/l	61.4		109	90-110			
Duplicate (W3J0602-DUP1) Source: 3J03055-01 Prepared & Analyzed: 10/06/23											
Total Suspended Solids	17.3		5	mg/l		17.3			0	10	
Duplicate (W3J0602-DUP2) Source: 3J04089-01 Prepared & Analyzed: 10/06/23											
Total Suspended Solids	44.0		5	mg/l		48.0			9	10	
Batch: W3J1251 - SM 5310B											
Blank (W3J1251-BLK1) Prepared: 10/13/23 Analyzed: 10/15/23											
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							
LCS (W3J1251-BS1) Prepared: 10/13/23 Analyzed: 10/15/23											
Total Organic Carbon (TOC)	0.914	0.19	0.30	mg/l	1.00		91	85-115			
Matrix Spike (W3J1251-MS1) Source: 3J04112-03 Prepared: 10/13/23 Analyzed: 10/15/23											
Total Organic Carbon (TOC)	5.56	0.19	0.30	mg/l	5.00	0.633	98	76-115			
Matrix Spike Dup (W3J1251-MSD1) Source: 3J04112-03 Prepared: 10/13/23 Analyzed: 10/15/23											
Total Organic Carbon (TOC)	5.46	0.19	0.30	mg/l	5.00	0.633	97	76-115	2	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0575 - EPA 200.8											
Blank (W3J0575-BLK1)											
					Prepared: 10/06/23 Analyzed: 10/10/23						
Cadmium, Total	ND	0.042	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Silver, Total	ND	0.055	0.20	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W3J0575-BS1)											
					Prepared: 10/06/23 Analyzed: 10/10/23						
Cadmium, Total	49.6	0.042	0.20	ug/l	50.0		99	85-115			
Copper, Total	52.1	0.23	0.50	ug/l	50.0		104	85-115			
Lead, Total	50.3	0.083	0.20	ug/l	50.0		100	85-115			
Silver, Total	51.7	0.055	0.20	ug/l	50.0		103	85-115			
Zinc, Total	52.1	1.7	10	ug/l	50.0		104	85-115			
Matrix Spike (W3J0575-MS1)											
		Source: 3J04087-01			Prepared: 10/06/23 Analyzed: 10/10/23						
Cadmium, Total	48.9	0.042	0.20	ug/l	50.0	ND	98	70-130			
Copper, Total	52.8	0.23	0.50	ug/l	50.0	0.772	104	70-130			
Lead, Total	49.3	0.083	0.20	ug/l	50.0	ND	99	70-130			
Silver, Total	50.7	0.055	0.20	ug/l	50.0	ND	101	70-130			
Zinc, Total	51.7	1.7	10	ug/l	50.0	ND	103	70-130			
Matrix Spike (W3J0575-MS2)											
		Source: 3J04087-04			Prepared: 10/06/23 Analyzed: 10/10/23						
Cadmium, Total	49.3	0.042	0.20	ug/l	50.0	ND	98	70-130			
Copper, Total	52.7	0.23	0.50	ug/l	50.0	0.951	103	70-130			
Lead, Total	49.4	0.083	0.20	ug/l	50.0	ND	99	70-130			
Silver, Total	51.1	0.055	0.20	ug/l	50.0	ND	102	70-130			
Zinc, Total	51.6	1.7	10	ug/l	50.0	ND	103	70-130			
Matrix Spike Dup (W3J0575-MSD1)											
		Source: 3J04087-01			Prepared: 10/06/23 Analyzed: 10/10/23						
Cadmium, Total	49.7	0.042	0.20	ug/l	50.0	ND	99	70-130	2	30	
Copper, Total	54.0	0.23	0.50	ug/l	50.0	0.772	106	70-130	2	30	
Lead, Total	49.8	0.083	0.20	ug/l	50.0	ND	100	70-130	0.9	30	
Silver, Total	51.7	0.055	0.20	ug/l	50.0	ND	103	70-130	2	30	
Zinc, Total	51.9	1.7	10	ug/l	50.0	ND	104	70-130	0.5	30	
Matrix Spike Dup (W3J0575-MSD2)											
		Source: 3J04087-04			Prepared: 10/06/23 Analyzed: 10/10/23						
Cadmium, Total	48.9	0.042	0.20	ug/l	50.0	ND	98	70-130	0.8	30	
Copper, Total	52.8	0.23	0.50	ug/l	50.0	0.951	104	70-130	0.06	30	
Lead, Total	49.2	0.083	0.20	ug/l	50.0	ND	98	70-130	0.4	30	
Silver, Total	51.0	0.055	0.20	ug/l	50.0	ND	102	70-130	0.2	30	
Zinc, Total	51.4	1.7	10	ug/l	50.0	ND	103	70-130	0.4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0338 - SM 9221B											
Blank (W3J0338-BLK1)											
Total Coliform	ND	1.8	1.8	MPN/100m L							

Prepared: 10/03/23 Analyzed: 10/11/23

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0533 - EPA 524.2											
Blank (W3J0533-BLK1)											
Tert-butyl alcohol	ND	0.45	2.0	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.2			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	43.5			ug/l	50.0		87	70-130			
LCS (W3J0533-BS1)											
Tert-butyl alcohol	20.7	0.45	2.0	ug/l	20.0		103	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.9			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	50.7			ug/l	50.0		101	70-130			
LCS Dup (W3J0533-BSD1)											
Tert-butyl alcohol	20.0	0.45	2.0	ug/l	20.0		100	70-130	3	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	48.9			ug/l	50.0		98	70-130			

Prepared: 10/06/23 Analyzed: 10/07/23

Prepared: 10/06/23 Analyzed: 10/07/23

Prepared: 10/06/23 Analyzed: 10/07/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:13

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
R-01	The MDL and/or MRL for this analyte has been raised to account for matrix interference.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order #

3503147

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles	PROJECT: COSM 97-005	ANALYSES REQUESTED 200-7 Fe, Total and Dissolved 200-8 Mn, Total and Dissolved 200-8 (Ag, Cd, Cr, Pb, Zn) 2810D SM - w Solids, TSS 508. - with Ext 524.2 - w TBA 9221B SM# MFT-6 TOC	SPECIAL HANDLING <input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package Charges will apply for weekends/holidays
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018	PHONE: ckindle@BrwnCald.com invoice to Rose Ford, Rford@BrwnCald.com		
PROJECT MANAGER Chris Kindle	SAMPLER		

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200-7 Fe, Total and Dissolved	200-8 Mn, Total and Dissolved	200-8 (Ag, Cd, Cr, Pb, Zn)	2810D SM - w Solids, TSS	508. - with Ext	524.2 - w TBA	9221B SM# MFT-6	TOC	COMMENTS
	10/3	8:55	G	Storm Drain	8			X	X	X	X	X		* samples date * time was taken from the bottle - UKA 10/3/23
		11:00	G	Storm Drain 2	8			X	X	X	X			
		13:00	G	Storm Drain 3	8			X	X	X	X			
		13:00	G	PT-SW4-54	2							X		

RELINQUISHED BY 	DATE / TIME 10/3/23 10:35	RECEIVED BY Magaly S	DATE / TIME 10.3.23 13:35	SAMPLE CONDITION: Actual Temperature: 18.6 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY Magaly S.	DATE / TIME 10.3.23 / 15:14	RECEIVED BY 	DATE / TIME 10/3/23 15:30		
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **3J03147**

Date/Time Received: **10/03/23 @ 15:30**

WKO Logged by: **Lester Abad**

of Samples: **04**

Samples Checked by: **Jerico Bolotano**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC				
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		18.6°C		
Samples received on ice? 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		BLUE		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, if Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 67108<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				AmL added

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Lester Abad*

Date: **10/03/23**

Work Orders: 3J04065

Report Date: 10/16/2023

Project: COSM 97-005

Received Date: 10/03/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

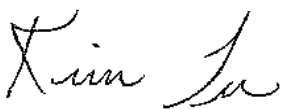
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/03/23 with the Chain-of-Custody document. The samples were received in good condition, at 18.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Certificate of Analysis

FINAL REPORT

Project Number: COSM 97-005

Reported:

10/16/2023 15:18

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GSC1-S4	Client	3J04065-01	Water	10/02/23 14:39	
PT-GSC1-S8	Client	3J04065-02	Water	10/02/23 14:40	
PT-GSC2-S4	Client	3J04065-03	Water	10/02/23 13:25	
PT-GSC2-S8	Client	3J04065-04	Water	10/02/23 13:25	
PT-GS1-S4	Client	3J04065-05	Water	10/02/23 15:35	
PT-GS1-S8	Client	3J04065-06	Water	10/02/23 15:35	
PT-GS2-S4	Client	3J04065-07	Water	10/02/23 15:40	
PT-GS2-S8	Client	3J04065-08	Water	10/02/23 15:40	
PT-GS3-S4	Client	3J04065-09	Water	10/02/23 16:22	
PT-GS3-S8	Client	3J04065-10	Water	10/02/23 16:22	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:18

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GSC1-S4
3J04065-01 (Water) Sampled: 10/02/23 14:39 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	2.9	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	3.5	2.7	5.0	ug/l	1	10/12/23	J
Manganese, Total	0.11	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

Sample: PT-GSC1-S8
3J04065-02 (Water) Sampled: 10/02/23 14:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.035	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.0044	0.00083	0.0050	mg/l	1	10/12/23	J

Sample Results

Sample: PT-GSC2-S4
3J04065-03 (Water) Sampled: 10/02/23 13:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	2.7	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	4.4	2.7	5.0	ug/l	1	10/12/23	J
Manganese, Total	0.092	0.00083	0.0050	mg/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GSC2-S8
3J04065-04 (Water) Sampled: 10/02/23 13:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.088	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.0053	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

(Continued)

Sample: PT-GS1-S4
3J04065-05 (Water) Sampled: 10/02/23 15:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.33	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	6.2	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.016	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

(Continued)

Sample: PT-GS1-S8
3J04065-06 (Water) Sampled: 10/02/23 15:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.021	0.0065	0.030	mg/l	1	10/12/23	J
Manganese, Dissolved	12	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.0033	0.00083	0.0050	mg/l	1	10/12/23	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GS2-S4
3J04065-07 (Water) Sampled: 10/02/23 15:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.48	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	5.7	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.021	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

(Continued)

Sample: PT-GS2-S8
3J04065-08 (Water) Sampled: 10/02/23 15:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.022	0.0065	0.030	mg/l	1	10/12/23	J
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.0034	0.00083	0.0050	mg/l	1	10/12/23	J

Sample Results

(Continued)

Sample: PT-GS3-S4
3J04065-09 (Water) Sampled: 10/02/23 16:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.053	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	4.8	2.7	5.0	ug/l	1	10/12/23	J
Manganese, Total	0.0065	0.00083	0.0050	mg/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GS3-S8
 3J04065-10 (Water) Sampled: 10/02/23 16:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7				Instr: ICP03			
Batch ID: W3J0718		Preparation: EPA 200.2		Prepared: 10/09/23 13:53		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.013	0.0065	0.030	mg/l	1	10/12/23	J
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.0038	0.00083	0.0050	mg/l	1	10/12/23	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:18

Project Manager: Brown & Caldwell

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0718 - EPA 200.7											
Blank (W3J0718-BLK1)					Prepared: 10/09/23 Analyzed: 10/12/23						
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W3J0718-BS1)					Prepared: 10/09/23 Analyzed: 10/12/23						
Iron, Dissolved	209	5.0	30	ug/l	200		104	85-115			
Iron, Total	0.209	0.0065	0.030	mg/l	0.200		104	85-115			
Manganese, Dissolved	190	2.7	5.0	ug/l	200		95	85-115			
Manganese, Total	0.190	0.00083	0.0050	mg/l	0.200		95	85-115			
Matrix Spike (W3J0718-MS1)					Source: 3J04065-02 Prepared: 10/09/23 Analyzed: 10/12/23						
Iron, Dissolved	247	5.0	30	ug/l	200	ND	123	70-130			
Iron, Total	0.247	0.0065	0.030	mg/l	0.200	0.0352	106	70-130			
Manganese, Dissolved	200	2.7	5.0	ug/l	200	ND	100	70-130			
Manganese, Total	0.200	0.00083	0.0050	mg/l	0.200	0.00444	98	70-130			
Matrix Spike (W3J0718-MS2)					Source: 3J04065-07 Prepared: 10/09/23 Analyzed: 10/12/23						
Iron, Total	0.745	0.0065	0.030	mg/l	0.200	0.479	133	70-130			MS-02
Manganese, Dissolved	210	2.7	5.0	ug/l	200	5.73	102	70-130			
Manganese, Total	0.210	0.00083	0.0050	mg/l	0.200	0.0205	95	70-130			
Matrix Spike Dup (W3J0718-MSD1)					Source: 3J04065-02 Prepared: 10/09/23 Analyzed: 10/12/23						
Iron, Dissolved	240	5.0	30	ug/l	200	ND	120	70-130	3	30	
Iron, Total	0.240	0.0065	0.030	mg/l	0.200	0.0352	102	70-130	3	30	
Manganese, Dissolved	192	2.7	5.0	ug/l	200	ND	96	70-130	4	30	
Manganese, Total	0.192	0.00083	0.0050	mg/l	0.200	0.00444	94	70-130	4	30	
Matrix Spike Dup (W3J0718-MSD2)					Source: 3J04065-07 Prepared: 10/09/23 Analyzed: 10/12/23						
Iron, Total	0.739	0.0065	0.030	mg/l	0.200	0.479	130	70-130	0.8	30	
Manganese, Dissolved	209	2.7	5.0	ug/l	200	5.73	102	70-130	0.3	30	
Manganese, Total	0.209	0.00083	0.0050	mg/l	0.200	0.0205	94	70-130	0.3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/16/2023 15:18

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3004065**

Page 1 of 1

CLIENT NAME: Brown and Caldwell - Los Angeles

PROJECT: COSM 97-005

SPECIAL HANDLING

ADDRESS: 1000 Wishite Boulevard, Suite 1690
Los Angeles, CA 90018

PHONE: ckindle@BwmCald.com

- Same Day Rush 150%
- 24 Hour Rush 100%
- 48-72 Hour Rush 75%
- 4 - 5 Day Rush 30%
- Rush Extractions 50%
- 10 - 15 Business Days
- QA/QC Data Packages

PROJECT MANAGER: Chris Kindle

Invoice to Rose Ford, Rford@BwmCald.com

SAMPLER: SAMPLER

Charges will apply for weekends/holidays
Method of Shipment:
COMMENTS:

ID#	DATE SAMPLED	TIME SAMPLED	SAMPL. TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved
PT-65C1-54	10/2/23	14:37	GW	PT-65C1-54	2	✓	✓
PT-65C1-58	10/2/23	14:40	GW	PT-65C1-58	2	✓	✓
	10/2/23	13:35	GW	PT-65C2-54	2	✓	✓
	10/2/23	13:25	GW	PT-65C2-58	2	✓	✓
	10/2/23	15:35	GW	PT-651-54	2	✓	✓
	10/2/23	15:25	GW	PT-651-58	2	✓	✓
	10/2/23	15:40	GW	PT-652-54	2	✓	✓
	10/2/23	15:40	GW	PT-652-58	2	✓	✓
	10/2/23	16:22	GW	PT-653-54	2	✓	✓
	10/2/23	16:22	GW	PT-653-58	2	✓	✓

RELINQUISHED BY: *WMM* DATE/TIME: 10/3/23 1:40 RECEIVED BY: *Maggaly S.* DATE/TIME: 10-3-23 13:40

RELINQUISHED BY: *Maggaly S.* DATE/TIME: 10-3-23 15:12 RECEIVED BY: *Maggaly S.* DATE/TIME: 10-3-23 15:12

SAMPLE CONDITION: Actual Temperature: 18.19 Preserved On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab

SAMPLE TYPE CODE: AQ=Aqueous NA=Non Aqueous SL=Sludge DW=Drinking Water WW=Waste Water RW=Rain Water GW=Ground Water SO=Soil SW=Solid Waste OL=Oil OT=Other Matrix

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client is responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.

Sample Receipt Checklist

Weck WKO: 3J04065
 WKO Logged by: Jerico Bolotano
 Samples Checked by: Jerico Bolotano

Date/Time Received: 10/03/23 @ 15:12
 # of Samples: 10
 Delivered by: RMS

	Task	Yes	No	N/A	Comments
COC	COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Receipt Information	Sample Temperature			18.6°C	
	Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Ice Type (Blue/Wet)			Wet	
	All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Preservation Verification?	Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
	pH verified upon receipt?				pH paper Lot# 3082367
	Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 67108<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cl Test Strip Lot#
	O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
	pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading Acid Lot# Amt added:
	Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerico Bolotano

Date: 10/04/23

Work Orders: 3J04124

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/20/2023

Received Date: 10/4/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/04/23 with the Chain-of-Custody document. The samples were received in good condition, at 2.2 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-SW8-S4	Client	3J04124-01	Water	10/04/23 09:17	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
AWWA in Water			
Aggressive Index		✓	
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFOuA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SM 9215E in Water			
Heterotrophic Plate Count		✓	
SM 9221B in Water			
Total Coliform		✓	
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-SW8-S4
3J04124-01 (Water) Sampled: 10/04/23 9:17 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W3J0542	Preparation: _NONE (LC)		Prepared: 10/06/23 08:07		Analyst: CLL		
Chloride, Total	130	0.19	0.50	mg/l	1	10/06/23	
Fluoride, Total	0.32	0.0090	0.10	mg/l	1	10/06/23	
Anions by IC, EPA Method 300.1							
Method: EPA 300.1			Instr: LC08_Channel2				
Batch ID: W3J1288	Preparation: _NONE (LC)		Prepared: 10/16/23 09:58		Analyst: CLL		
Chlorate	91	1.7	10	ug/l	1	10/17/23	
Chlorite	ND	2.2	10	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
Dichloroacetate	90%	Conc: 448	90-115			10/17/23	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W3J1356	Preparation: _NONE (METALS)		Prepared: 10/16/23 14:17		Analyst: aln		
Aggressive Index	12.2			AGI	1	10/16/23	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W3J0405	Preparation: _NONE (WETCHEM)		Prepared: 10/04/23 17:48		Analyst: bel		
Threshold Odor Number	1.0		1.0	T.O.N.	1	10/04/23 19:09	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W3J1121	Preparation: _NONE (WETCHEM)		Prepared: 10/12/23 10:12		Analyst: AEC		
Ammonia as N	0.093	0.017	0.10	mg/l	1	10/13/23	J
Method: EPA 353.2			Instr: AA01				
Batch ID: W3J0511	Preparation: _NONE (WETCHEM)		Prepared: 10/05/23 14:23		Analyst: ISM		
Nitrate as N	5.5	0.040	0.20	mg/l	1	10/05/23 15:28	
Nitrite as N	50	42	100	ug/l	1	10/05/23 15:28	J
Method: EPA 365.3			Instr: UVVIS04				
Batch ID: W3J1143	Preparation: _NONE (WETCHEM)		Prepared: 10/12/23 13:21		Analyst: ymt		
Phosphorus as PO4, Total	0.32	0.021	0.030	mg/l	1	10/23/23	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W3J0438	Preparation: _NONE (WETCHEM)		Prepared: 10/05/23 09:39		Analyst: kac		
Color	ND		3.0	Color Units	1	10/05/23 18:19	
Method: SM 2320B			Instr: AA02				
Batch ID: W3J0565	Preparation: _NONE (WETCHEM)		Prepared: 10/06/23 09:59		Analyst: mes		
Alkalinity as CaCO3	370	7.2	20	mg/l	1	10/06/23	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W3J1354	Preparation: _NONE (METALS)		Prepared: 10/16/23 14:15		Analyst: aln		
Langelier Index @ 20 C	0.198	-20.0	-10.0	LSI	1	10/16/23	
Langelier Index @ 60 C	0.706	-20.0	-10.0	LSI	1	10/16/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW8-S4
3J04124-01 (Water) Sampled: 10/04/23 9:17 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W3J1354	Preparation: _NONE (METALS)			Prepared: 10/16/23 14:15		Analyst: aln	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W3J1357	Preparation: _NONE (METALS)			Prepared: 10/16/23 14:18		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	40.8	-100	-100	N/A	1	10/16/23	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W3J0395	Preparation: _NONE (WETCHEM)			Prepared: 10/04/23 17:12		Analyst: bel	
Total Dissolved Solids	1100	4.0	10	mg/l	1	10/05/23	
Method: SM 4500H+ -B				Instr: AA02			
Batch ID: W3J0392	Preparation: _NONE (WETCHEM)			Prepared: 10/04/23 16:51		Analyst: mes	
pH	7.04	0.10	0.10	pH Units	1	10/04/23 18:44	*
Hexavalent Chromium by IC							
Method: EPA 218.6				Instr: LC13			
Batch ID: W3J1089	Preparation: _NONE (LC)			Prepared: 10/12/23 08:21		Analyst: CLL	
Chromium 6+	0.64	0.0079	0.020	ug/l	1	10/12/23	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W3J0535	Preparation: EPA 5030B			Prepared: 10/06/23 07:08		Analyst: ADM	
1,2,3-Trichloropropane	0.019	0.0012	0.0050	ug/l	1	10/07/23	
Metals by EPA 200 Series Methods							
Method: Calculation				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 10/09/23 10:46		Analyst: kvm	
Hardness as CaCO3, Total	641	0.221	3.31	mg/l	1	10/13/23	
Method: EPA 200.7				Instr: ICPO3			
Batch ID: W3J0697	Preparation: EPA 200.2			Prepared: 10/09/23 10:46		Analyst: kvm	
Boron, Total	130	3.0	10	ug/l	1	10/13/23	
Calcium, Total	142	0.0240	0.500	mg/l	1	10/13/23	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/13/23	
Iron, Total	0.041	0.0065	0.030	mg/l	1	10/13/23	
Magnesium, Total	69.3	0.0390	0.500	mg/l	1	10/13/23	
Potassium, Total	3.1	0.086	0.50	mg/l	1	10/13/23	
Silica as SiO2, Dissolved	36	0.0086	0.10	mg/l	1	10/13/23	
Silica as SiO2, Total	35	0.0086	0.10	mg/l	1	10/13/23	
Sodium, Total	86	0.13	1.0	mg/l	1	10/13/23	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W3J0698	Preparation: EPA 200.2			Prepared: 10/09/23 15:35		Analyst: tyc	
Aluminum, Total	8.7	4.4	20	ug/l	1	10/10/23	J
Arsenic, Total	0.71	0.074	0.40	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW8-S4
3J04124-01 (Water) Sampled: 10/04/23 9:17 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Metals by EPA 200 Series Methods (Continued)

Method: EPA 200.8		Instr: ICPMS06					
Batch ID: W3J0698	Preparation: EPA 200.2	Prepared: 10/09/23 15:35					
		Analyst: tyc					
Barium, Total	52	0.14	1.0 ug/l	1	10/10/23		
Copper, Total	ND	0.23	0.50 ug/l	1	10/10/23		
Lead, Total	ND	0.083	0.20 ug/l	1	10/10/23		
Manganese, Dissolved	5.9	0.11	1.0 ug/l	1	10/10/23		
Manganese, Total	9.5	0.23	1.0 ug/l	1	10/10/23		
Selenium, Total	4.1	0.067	0.40 ug/l	1	10/10/23		
Strontium, Total	770	0.036	0.20 ug/l	1	10/10/23		

Microbiological Parameters by Standard Methods

Method: SM 9215E		Instr: INC06					
Batch ID: W3J0460	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/04/23 16:34					
		Analyst: slh					
Heterotrophic Plate Count	>=740	2.0	2.0 MPN/mL	1	10/06/23		

Method: SM 9221B		Instr: INC12					
Batch ID: W3J0458	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/04/23 16:50					
		Analyst: atd					
Total Coliform	2.0	1.8	1.8 MPN/100mL	1	10/11/23		

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06					
Batch ID: W3J1300	Preparation: EPA 537/SPE	Prepared: 10/16/23 10:12					
		Analyst: jna					
11CI-PF3OUdS	ND	0.46	1.7 ng/l	1	10/18/23		
9CI-PF3ONS	ND	0.44	1.7 ng/l	1	10/18/23		
ADONA	ND	0.46	1.7 ng/l	1	10/18/23		
EtFOSAA	ND	0.40	1.7 ng/l	1	10/18/23		
HFPO-DA	ND	0.72	1.7 ng/l	1	10/18/23		
MeFOSAA	ND	0.48	1.7 ng/l	1	10/18/23		
PFBS	3.7	0.48	1.7 ng/l	1	10/18/23		
PFDA	ND	0.37	1.7 ng/l	1	10/18/23		
PFDoA	ND	0.54	1.7 ng/l	1	10/18/23		
PFHpA	1.4	0.44	1.7 ng/l	1	10/18/23		J
PFHxA	6.6	0.40	1.7 ng/l	1	10/18/23		
PFHxS	3.2	0.49	1.7 ng/l	1	10/18/23		
PFNA	ND	0.43	1.7 ng/l	1	10/18/23		
PFOA	2.7	0.55	1.7 ng/l	1	10/18/23		
PFOS	ND	0.44	1.7 ng/l	1	10/18/23		
PFTeDA	ND	0.37	1.7 ng/l	1	10/18/23		
PFTrDA	ND	0.35	1.7 ng/l	1	10/18/23		
PFUnA	ND	0.39	1.7 ng/l	1	10/18/23		

Surrogate(s)

3J04124

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW8-S4
3J04124-01 (Water) Sampled: 10/04/23 9:17 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Method: EPA 537.1	Instr: LCMS06
Batch ID: W3J1300	Preparation: EPA 537/SPE
Prepared: 10/16/23 10:12	Analyst: jna
13C2-PFDA	102% Conc: 33.8 70-130 10/18/23
13C2-PFHxA	103% Conc: 34.1 70-130 10/18/23
d5-EtFOSAA	113% Conc: 149 70-130 10/18/23
HFPO-DA-13C3	106% Conc: 35.2 70-130 10/18/23

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2	Instr: GCMS08
Batch ID: W3J0533	Preparation: EPA 5030B
Prepared: 10/06/23 07:06	Analyst: ADM
1,1,1,2-Tetrachloroethane	ND 0.24 0.50 ug/l 1 10/07/23
1,1,1-Trichloroethane	ND 0.26 0.50 ug/l 1 10/07/23
1,1,2,2-Tetrachloroethane	ND 0.20 0.50 ug/l 1 10/07/23
1,1,2-Trichloroethane	ND 0.19 0.50 ug/l 1 10/07/23
1,1-Dichloroethane	0.53 0.27 0.50 ug/l 1 10/07/23
1,1-Dichloroethene	3.2 0.16 0.50 ug/l 1 10/07/23
1,1-Dichloropropene	ND 0.14 0.50 ug/l 1 10/07/23
1,2,3-Trichlorobenzene	ND 0.40 0.50 ug/l 1 10/07/23
1,2,4-Trichlorobenzene	ND 0.17 0.50 ug/l 1 10/07/23
1,2,4-Trimethylbenzene	ND 0.20 0.50 ug/l 1 10/07/23
1,2-Dichloroethane	ND 0.24 0.50 ug/l 1 10/07/23
1,2-Dichloropropane	ND 0.13 0.50 ug/l 1 10/07/23
1,3,5-Trimethylbenzene	ND 0.17 0.50 ug/l 1 10/07/23
1,3-Dichloropropane	ND 0.27 0.50 ug/l 1 10/07/23
1,3-Dichloropropene, Total	ND 0.50 ug/l 1 10/07/23
2,2-Dichloropropane	ND 0.17 0.50 ug/l 1 10/07/23
2-Butanone	ND 1.5 5.0 ug/l 1 10/07/23
2-Chlorotoluene	ND 0.15 0.50 ug/l 1 10/07/23
2-Hexanone	ND 1.2 5.0 ug/l 1 10/07/23
4-Chlorotoluene	ND 0.15 0.50 ug/l 1 10/07/23
4-Methyl-2-pentanone	ND 1.8 5.0 ug/l 1 10/07/23
Benzene	ND 0.15 0.50 ug/l 1 10/07/23
Bromobenzene	ND 0.15 0.50 ug/l 1 10/07/23
Bromochloromethane	ND 0.15 0.50 ug/l 1 10/07/23
Bromodichloromethane	ND 0.24 0.50 ug/l 1 10/07/23
Bromoform	ND 0.38 0.50 ug/l 1 10/07/23
Bromomethane	ND 0.27 0.50 ug/l 1 10/07/23
Carbon tetrachloride	0.60 0.27 0.50 ug/l 1 10/07/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW8-S4
3J04124-01 (Water) Sampled: 10/04/23 9:17 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0533		Preparation: EPA 5030B		Prepared: 10/06/23 07:06		Analyst: ADM	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/07/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/07/23	
Chloroform	4.3	0.27	0.50	ug/l	1	10/07/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/07/23	
cis-1,2-Dichloroethene	1.2	0.25	0.50	ug/l	1	10/07/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/07/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/07/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/07/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/07/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/07/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/07/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/07/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/07/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/07/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/07/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/07/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/07/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/07/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/07/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/07/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/07/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/07/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/07/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/07/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/07/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/07/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/07/23	
Styrene	ND	0.19	0.50	ug/l	1	10/07/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/07/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/07/23	
Tetrachloroethene	15	0.18	0.50	ug/l	1	10/07/23	
THMs, Total	4.3		0.50	ug/l	1	10/07/23	
Toluene	ND	0.29	0.50	ug/l	1	10/07/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/07/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/07/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW8-S4
3J04124-01 (Water) Sampled: 10/04/23 9:17 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0533		Preparation: EPA 5030B		Prepared: 10/06/23 07:06		Analyst: ADM	
Trichloroethene	32	0.18	0.50	ug/l	1	10/07/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/07/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/07/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/07/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	97%	Conc: 48.7	70-130			10/07/23	
4-Bromofluorobenzene	92%	Conc: 46.2	70-130			10/07/23	

Sample Results

(Continued)

Sample: PT-SW8-S4
3J04124-01RE1 (Water) Sampled: 10/04/23 9:17 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	20	1.4	3.5	ug/l	50	10/11/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	96%	Conc: 9.55	70-130			10/11/23	
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W3J0542		Preparation: _NONE (LC)		Prepared: 10/06/23 08:07		Analyst: CLL	
Sulfate as SO4	290	0.72	1.5	mg/l	3	10/07/23	
Anions by IC, EPA Method 300.1							
Method: EPA 300.1			Instr: LC08_Channel2				
Batch ID: W3J1288		Preparation: _NONE (LC)		Prepared: 10/16/23 09:58		Analyst: CLL	
Bromate	ND	7.0	25	ug/l	5	10/17/23	M-05
Bromide	780	8.5	50	ug/l	5	10/17/23	M-06
<i>Surrogate(s)</i>							
Dichloroacetate	101%	Conc: 505	90-115			10/17/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0649 - EPA 522											
Blank (W3J0649-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							B-02
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.59			ug/l	10.0		86	70-130			
LCS (W3J0649-BS1)											
1,4-Dioxane	0.348	0.028	0.070	ug/l	0.400		87	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.62			ug/l	10.0		86	70-130			
LCS Dup (W3J0649-BSD1)											
1,4-Dioxane	0.411	0.028	0.070	ug/l	0.400		103	70-130	17	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.9			ug/l	10.0		109	70-130			

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0542 - EPA 300.0											
Blank (W3J0542-BLK1)											
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W3J0542-BS1)											
Chloride, Total	20.9	0.19	0.50	mg/l	20.0		105	90-110			
Fluoride, Total	1.96	0.0090	0.10	mg/l	2.00		98	90-110			
Sulfate as SO4	20.6	0.24	0.50	mg/l	20.0		103	90-110			
Matrix Spike (W3J0542-MS1)											
Source: 3118003-01											
Prepared: 10/06/23 Analyzed: 10/07/23											
Chloride, Total	383	1.9	5.0	mg/l	200	160	112	76-118			
Fluoride, Total	20.5	0.090	1.0	mg/l	20.0	0.542	100	86-107			
Sulfate as SO4	330	2.4	5.0	mg/l	200	113	109	78-111			
Matrix Spike (W3J0542-MS2)											
Source: 3118003-04											
Prepared: 10/06/23 Analyzed: 10/07/23											
Chloride, Total	301	1.9	5.0	mg/l	200	87.1	107	76-118			
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.708	100	86-107			
Sulfate as SO4	262	2.4	5.0	mg/l	200	51.4	105	78-111			
Matrix Spike Dup (W3J0542-MSD1)											
Source: 3118003-01											
Prepared: 10/06/23 Analyzed: 10/07/23											
Chloride, Total	383	1.9	5.0	mg/l	200	160	111	76-118	0.05	20	
Fluoride, Total	20.5	0.090	1.0	mg/l	20.0	0.542	100	86-107	0.1	20	
Sulfate as SO4	330	2.4	5.0	mg/l	200	113	109	78-111	0.05	20	
Matrix Spike Dup (W3J0542-MSD2)											
Source: 3118003-04											
Prepared: 10/06/23 Analyzed: 10/07/23											
Chloride, Total	302	1.9	5.0	mg/l	200	87.1	107	76-118	0.1	20	
Fluoride, Total	20.3	0.090	1.0	mg/l	20.0	0.708	98	86-107	2	20	



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0542 - EPA 300.0 (Continued)											
Matrix Spike Dup (W3J0542-MSD2)											
		Source: 3118003-04			Prepared: 10/06/23 Analyzed: 10/07/23						
Sulfate as SO4	261	2.4	5.0	mg/l	200	51.4	105	78-111	0.06	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1288 - EPA 300.1											
Blank (W3J1288-BLK1)					Prepared & Analyzed: 10/16/23						
Bromate	ND	1.4	5.0	ug/l							
Bromide	ND	1.7	10	ug/l							
Chlorate	ND	1.7	10	ug/l							
Chlorite	ND	2.2	10	ug/l							
<i>Surrogate(s)</i>											
Dichloroacetate	523			ug/l	500		105	90-115			
LCS (W3J1288-BS1)					Prepared & Analyzed: 10/16/23						
Bromate	101	1.4	5.0	ug/l	100		101	85-115			
Bromide	99.0	1.7	10	ug/l	100		99	85-115			
Chlorate	104	1.7	10	ug/l	100		104	85-115			
Chlorite	103	2.2	10	ug/l	100		103	85-115			
<i>Surrogate(s)</i>											
Dichloroacetate	538			ug/l	500		108	90-115			
Matrix Spike (W3J1288-MS1)					Source: 3114012-02 Prepared: 10/16/23 Analyzed: 10/17/23						
Bromate	57.8	1.4	5.0	ug/l	100	ND	58	64-133			MS-01
Bromide	1270	1.7	10	ug/l	100	1240	31	73-125			MS-02
Chlorate	81.8	1.7	10	ug/l	100	ND	82	76-120			
Chlorite	88.7	2.2	10	ug/l	100	ND	89	78-129			
<i>Surrogate(s)</i>											
Dichloroacetate	460			ug/l	500		92	90-115			
Matrix Spike (W3J1288-MS2)					Source: 3114013-01 Prepared & Analyzed: 10/16/23						
Bromate	145	1.4	5.0	ug/l	100	ND	145	64-133			MS-01
Bromide	426	1.7	10	ug/l	100	368	58	73-125			MS-01
Chlorate	262	1.7	10	ug/l	100	191	71	76-120			MS-01
Chlorite	99.7	2.2	10	ug/l	100	ND	100	78-129			
<i>Surrogate(s)</i>											
Dichloroacetate	515			ug/l	500		103	90-115			
Matrix Spike Dup (W3J1288-MSD1)					Source: 3114012-02 Prepared: 10/16/23 Analyzed: 10/17/23						
Bromate	56.2	1.4	5.0	ug/l	100	ND	56	64-133	3	20	MS-01
Bromide	1270	1.7	10	ug/l	100	1240	28	73-125	0.2	20	MS-02
Chlorate	77.6	1.7	10	ug/l	100	ND	78	76-120	5	20	
Chlorite	89.2	2.2	10	ug/l	100	ND	89	78-129	0.5	20	
<i>Surrogate(s)</i>											
Dichloroacetate	468			ug/l	500		94	90-115			
Matrix Spike Dup (W3J1288-MSD2)					Source: 3114013-01 Prepared & Analyzed: 10/16/23						
Bromate	133	1.4	5.0	ug/l	100	ND	133	64-133	9	20	
Bromide	416	1.7	10	ug/l	100	368	48	73-125	2	20	MS-01
Chlorate	259	1.7	10	ug/l	100	191	68	76-120	1	20	MS-01
Chlorite	88.2	2.2	10	ug/l	100	ND	88	78-129	12	20	
<i>Surrogate(s)</i>											



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Anions by IC, EPA Method 300.1 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1288 - EPA 300.1 (Continued)											
Matrix Spike Dup (W3J1288-MSD2)			Source: 3114013-01			Prepared & Analyzed: 10/16/23					
<i>Surrogate(s)</i>	-----										
Dichloroacetate	465			ug/l	500		93	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0392 - SM 4500H+-B											
LCS (W3J0392-BS1)											
pH	6.94	0.10	0.10	pH Units	6.86		101	98.8-101			
Prepared & Analyzed: 10/04/23											
Duplicate (W3J0392-DUP1)											
pH	7.62	0.10	0.10	pH Units		7.40			3	3.1	
Source: 3I08003-06 Prepared & Analyzed: 10/04/23											
Batch: W3J0395 - SM 2540C											
Blank (W3J0395-BLK1)											
Total Dissolved Solids	ND	4.0	10	mg/l							
Prepared: 10/04/23 Analyzed: 10/05/23											
LCS (W3J0395-BS1)											
Total Dissolved Solids	827	4.0	10	mg/l	824		100	97-103			
Prepared: 10/04/23 Analyzed: 10/05/23											
Duplicate (W3J0395-DUP1)											
Total Dissolved Solids	35600	4.0	10	mg/l		35700			0.3	10	
Source: 3J03139-01 Prepared: 10/04/23 Analyzed: 10/05/23											
Duplicate (W3J0395-DUP2)											
Total Dissolved Solids	1710	4.0	10	mg/l		1680			2	10	
Source: 3J04103-01 Prepared: 10/04/23 Analyzed: 10/05/23											
Batch: W3J0405 - EPA 140.1											
Blank (W3J0405-BLK1)											
Threshold Odor Number	1.0		1.0	T.O.N.							J
Prepared & Analyzed: 10/04/23											
Duplicate (W3J0405-DUP1)											
Threshold Odor Number	1.0		1.0	T.O.N.		1.0			0	20	J
Source: 3J04124-01 Prepared: 10/04/23											
Batch: W3J0438 - SM 2120B											
LCS (W3J0438-BS1)											
Color	10.0		3.0	Color Units	10.0		100	95-105			
Prepared & Analyzed: 10/05/23											
Duplicate (W3J0438-DUP1)											
Color	ND		3.0	Color Units		ND				10	
Source: 3J04099-02 Prepared: 10/05/23											
Duplicate (W3J0438-DUP2)											
Color	ND		3.0	Color Units		ND				10	
Source: 3J04099-03 Prepared: 10/05/23											
Batch: W3J0511 - EPA 353.2											
Blank (W3J0511-BLK1)											
Nitrate as N	ND	0.040	0.20	mg/l							
Nitrite as N	ND	42	100	ug/l							
Prepared & Analyzed: 10/05/23											
LCS (W3J0511-BS1)											
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101	90-110			
Nitrite as N	983	42	100	ug/l	1000		98	90-110			
Prepared & Analyzed: 10/05/23											
Matrix Spike (W3J0511-MS1)											
Nitrate as N	7.55	0.040	0.20	mg/l	2.00	5.46	104	90-110			
Nitrite as N	1010	42	100	ug/l	1000	49.8	96	90-110			
Source: 3J04124-01 Prepared: 10/05/23											
Matrix Spike Dup (W3J0511-MSD1)											
Nitrate as N	7.51	0.040	0.20	mg/l	2.00	5.46	102	90-110	0.5	20	
Nitrite as N	1010	42	100	ug/l	1000	49.8	96	90-110	0	20	
Source: 3J04124-01 Prepared: 10/05/23											

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0565 - SM 2320B											
Blank (W3J0565-BLK1)											
Alkalinity as CaCO3	ND	7.2	20	mg/l	Prepared & Analyzed: 10/06/23						
LCS (W3J0565-BS1)											
Alkalinity as CaCO3	191	7.2	20	mg/l	186	103	94-108				
Duplicate (W3J0565-DUP1)											
Source: 3I29006-01											
Alkalinity as CaCO3	252	7.2	20	mg/l	258				2	15	
Batch: W3J1121 - EPA 350.1											
Blank (W3J1121-BLK1)											
Ammonia as N	ND	0.017	0.10	mg/l	Prepared: 10/12/23 Analyzed: 10/13/23						
Blank (W3J1121-BLK2)											
Ammonia as N	ND	0.017	0.10	mg/l	Prepared: 10/12/23 Analyzed: 10/13/23						
LCS (W3J1121-BS1)											
Ammonia as N	0.241	0.017	0.10	mg/l	0.250	96	90-110				
LCS (W3J1121-BS2)											
Ammonia as N	0.254	0.017	0.10	mg/l	0.250	102	90-110				
Matrix Spike (W3J1121-MS1)											
Source: 3J04122-02											
Ammonia as N	0.248	0.017	0.10	mg/l	0.250	ND	99	90-110			
Matrix Spike (W3J1121-MS2)											
Source: 3J04122-03											
Ammonia as N	0.254	0.017	0.10	mg/l	0.250	ND	101	90-110			
Matrix Spike Dup (W3J1121-MSD1)											
Source: 3J04122-02											
Ammonia as N	0.249	0.017	0.10	mg/l	0.250	ND	100	90-110	0.5	15	
Matrix Spike Dup (W3J1121-MSD2)											
Source: 3J04122-03											
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	ND	102	90-110	0.4	15	
Batch: W3J1143 - EPA 365.3											
Blank (W3J1143-BLK1)											
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l	Prepared: 10/12/23 Analyzed: 10/23/23						
LCS (W3J1143-BS1)											
Phosphorus as PO4, Total	0.611	0.021	0.030	mg/l	0.612	100	90-110				
Matrix Spike (W3J1143-MS1)											
Source: 3J03095-02											
Phosphorus as PO4, Total	0.998	0.021	0.030	mg/l	0.612	0.357	105	90-110			
Matrix Spike Dup (W3J1143-MSD1)											
Source: 3J03095-02											
Phosphorus as PO4, Total	0.962	0.021	0.030	mg/l	0.612	0.357	99	90-110	4	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Hexavalent Chromium by IC

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1089 - EPA 218.6											
Blank (W3J1089-BLK1)					Prepared & Analyzed: 10/12/23						
Chromium 6+	ND	0.0079	0.020	ug/l							
LCS (W3J1089-BS1)					Prepared & Analyzed: 10/12/23						
Chromium 6+	5.32	0.0079	0.020	ug/l	5.00		106	90-110			
Matrix Spike (W3J1089-MS1)					Source: 3J11052-04		Prepared & Analyzed: 10/12/23				
Chromium 6+	5.32	0.0079	0.020	ug/l	5.00	0.139	104	88-112			
Matrix Spike Dup (W3J1089-MSD1)					Source: 3J11052-04		Prepared & Analyzed: 10/12/23				
Chromium 6+	5.42	0.0079	0.020	ug/l	5.00	0.139	106	88-112	2	10	

Quality Control Results

(Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0535 - SRL 524M-TCP											
Blank (W3J0535-BLK1)					Prepared & Analyzed: 10/06/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W3J0535-BS1)					Prepared & Analyzed: 10/06/23						
1,2,3-Trichloropropane	0.0192	0.0012	0.0050	ug/l	0.0200		96	80-120			
LCS Dup (W3J0535-BSD1)					Prepared & Analyzed: 10/06/23						
1,2,3-Trichloropropane	0.0186	0.0012	0.0050	ug/l	0.0200		93	80-120	3	20	
Duplicate (W3J0535-DUP1)					Source: 3I22017-01		Prepared & Analyzed: 10/06/23				
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0697 - EPA 200.7											
Blank (W3J0697-BLK1)											
					Prepared: 10/09/23 Analyzed: 10/13/23						
Boron, Total	ND	3.0	10	ug/l							
Calcium, Total	ND	0.0240	0.500	mg/l							
Iron, Dissolved	9.32	5.0	30	ug/l							J
Iron, Total	ND	0.0065	0.030	mg/l							
Magnesium, Total	ND	0.0390	0.500	mg/l							
Potassium, Total	ND	0.086	0.50	mg/l							
Silica as SiO2, Dissolved	ND	0.0086	0.10	mg/l							
Silica as SiO2, Total	ND	0.0086	0.10	mg/l							
Sodium, Total	ND	0.13	1.0	mg/l							
LCS (W3J0697-BS1)											
					Prepared: 10/09/23 Analyzed: 10/13/23						
Boron, Total	214	3.0	10	ug/l	200		107	85-115			
Calcium, Total	47.4	0.0240	0.500	mg/l	50.2		95	85-115			
Iron, Dissolved	210	5.0	30	ug/l	200		105	85-115			
Iron, Total	0.210	0.0065	0.030	mg/l	0.200		105	85-115			
Magnesium, Total	47.8	0.0390	0.500	mg/l	50.2		95	85-115			
Potassium, Total	53.4	0.086	0.50	mg/l	52.1		103	85-115			
Silica as SiO2, Dissolved	43.4	0.0086	0.10	mg/l	43.3		100	85-115			
Silica as SiO2, Total	43.4	0.0086	0.10	mg/l	43.3		100	85-115			
Sodium, Total	47.5	0.13	1.0	mg/l	50.2		95	85-115			
Matrix Spike (W3J0697-MS1)											
					Source: 3125004-01 Prepared: 10/09/23 Analyzed: 10/13/23						
Boron, Total	970	3.0	10	ug/l	200	760	105	70-130			
Calcium, Total	323	0.0240	0.500	mg/l	50.2	283	80	70-130			
Iron, Dissolved	209	5.0	30	ug/l	200	ND	105	70-130			
Iron, Total	0.209	0.0065	0.030	mg/l	0.200	ND	105	70-130			
Magnesium, Total	215	0.0390	0.500	mg/l	50.2	169	91	70-130			
Potassium, Total	88.7	0.086	0.50	mg/l	52.1	24.5	123	70-130			
Silica as SiO2, Dissolved	201	0.0086	0.10	mg/l	43.3	164	85	70-130			
Silica as SiO2, Total	201	0.0086	0.10	mg/l	43.3	164	85	70-130			
Sodium, Total	598	0.13	1.0	mg/l	50.2	563	71	70-130			
Matrix Spike (W3J0697-MS2)											
					Source: 3125010-04 Prepared: 10/09/23 Analyzed: 10/13/23						
Boron, Total	930	3.0	10	ug/l	200	713	109	70-130			
Calcium, Total	217	0.0240	0.500	mg/l	50.2	175	84	70-130			
Iron, Dissolved	399	5.0	30	ug/l	200	174	113	70-130			
Iron, Total	0.399	0.0065	0.030	mg/l	0.200	0.174	113	70-130			
Magnesium, Total	109	0.0390	0.500	mg/l	50.2	64.1	90	70-130			
Potassium, Total	66.8	0.086	0.50	mg/l	52.1	9.33	110	70-130			
Silica as SiO2, Dissolved	66.2	0.0086	0.10	mg/l	43.3	22.5	101	70-130			
Silica as SiO2, Total	66.2	0.0086	0.10	mg/l	43.3	22.5	101	70-130			
Sodium, Total	200	0.13	1.0	mg/l	50.2	154	91	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0697 - EPA 200.7 (Continued)											
Matrix Spike (W3J0697-MS2)		Source: 3125010-04			Prepared: 10/09/23 Analyzed: 10/13/23						
Matrix Spike Dup (W3J0697-MSD1)											
Source: 3125004-01		Prepared: 10/09/23 Analyzed: 10/13/23									
Boron, Total	959	3.0	10	ug/l	200	760	100	70-130	1	30	
Calcium, Total	320	0.0240	0.500	mg/l	50.2	283	73	70-130	1	30	
Iron, Dissolved	208	5.0	30	ug/l	200	ND	104	70-130	0.7	30	
Iron, Total	0.208	0.0065	0.030	mg/l	0.200	ND	104	70-130	0.7	30	
Magnesium, Total	212	0.0390	0.500	mg/l	50.2	169	86	70-130	1	30	
Potassium, Total	87.8	0.086	0.50	mg/l	52.1	24.5	122	70-130	1	30	
Silica as SiO ₂ , Dissolved	199	0.0086	0.10	mg/l	43.3	164	82	70-130	0.7	30	
Silica as SiO ₂ , Total	199	0.0086	0.10	mg/l	43.3	164	82	70-130	0.7	30	
Sodium, Total	591	0.13	1.0	mg/l	50.2	563	57	70-130	1	30	MS-02
Matrix Spike Dup (W3J0697-MSD2)											
Source: 3125010-04		Prepared: 10/09/23 Analyzed: 10/13/23									
Boron, Total	938	3.0	10	ug/l	200	713	113	70-130	0.9	30	
Calcium, Total	219	0.0240	0.500	mg/l	50.2	175	88	70-130	1	30	
Iron, Dissolved	396	5.0	30	ug/l	200	174	111	70-130	0.9	30	
Iron, Total	0.396	0.0065	0.030	mg/l	0.200	0.174	111	70-130	0.9	30	
Magnesium, Total	110	0.0390	0.500	mg/l	50.2	64.1	92	70-130	1	30	
Potassium, Total	67.5	0.086	0.50	mg/l	52.1	9.33	112	70-130	1	30	
Silica as SiO ₂ , Dissolved	67.0	0.0086	0.10	mg/l	43.3	22.5	103	70-130	1	30	
Silica as SiO ₂ , Total	67.0	0.0086	0.10	mg/l	43.3	22.5	103	70-130	1	30	
Sodium, Total	201	0.13	1.0	mg/l	50.2	154	94	70-130	0.8	30	
Batch: W3J0698 - EPA 200.8											
Blank (W3J0698-BLK1)		Prepared: 10/09/23 Analyzed: 10/10/23									
Aluminum, Total	ND	4.4	20	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W3J0698-BS1)											
Prepared: 10/09/23 Analyzed: 10/10/23											
Aluminum, Total	53.3	4.4	20	ug/l	50.0		106	85-115			
Arsenic, Total	51.3	0.074	0.40	ug/l	50.0		103	85-115			
Barium, Total	51.5	0.14	1.0	ug/l	50.0		103	85-115			
Copper, Total	52.1	0.23	0.50	ug/l	50.0		104	85-115			
Lead, Total	49.6	0.083	0.20	ug/l	50.0		99	85-115			
Manganese, Dissolved	50.2	0.11	1.0	ug/l	50.0		100	85-115			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0698 - EPA 200.8 (Continued)											
LCS (W3J0698-BS1)											
						Prepared: 10/09/23 Analyzed: 10/10/23					
Manganese, Total	50.2	0.23	1.0	ug/l	50.0		100	85-115			
Selenium, Total	48.5	0.067	0.40	ug/l	50.0		97	85-115			
Strontium, Total	49.5	0.036	0.20	ug/l	50.0		99	85-115			
Matrix Spike (W3J0698-MS1)											
						Source: 3I25010-01 Prepared: 10/09/23 Analyzed: 10/10/23					
Aluminum, Total	1620	4.4	20	ug/l	50.0	1200	853	70-130			MS-02
Arsenic, Total	54.7	0.074	0.40	ug/l	50.0	3.22	103	70-130			
Barium, Total	117	0.14	1.0	ug/l	50.0	65.7	103	70-130			
Copper, Total	49.6	0.23	0.50	ug/l	50.0	2.17	95	70-130			
Lead, Total	51.2	0.083	0.20	ug/l	50.0	0.890	100	70-130			
Manganese, Total	246	0.23	1.0	ug/l	50.0	203	85	70-130			
Selenium, Total	50.5	0.067	0.40	ug/l	50.0	2.69	96	70-130			
Strontium, Total	1890	0.036	0.20	ug/l	50.0	1880	9	70-130			MS-02
Matrix Spike (W3J0698-MS2)											
						Source: 3J04091-05 Prepared: 10/09/23 Analyzed: 10/10/23					
Aluminum, Total	467	4.4	20	ug/l	50.0	358	218	70-130			MS-02
Arsenic, Total	51.5	0.074	0.40	ug/l	50.0	1.41	100	70-130			
Barium, Total	145	0.14	1.0	ug/l	50.0	92.2	105	70-130			
Copper, Total	60.9	0.23	0.50	ug/l	50.0	11.1	100	70-130			
Lead, Total	51.0	0.083	0.20	ug/l	50.0	1.08	100	70-130			
Manganese, Total	61.0	0.23	1.0	ug/l	50.0	11.8	98	70-130			
Selenium, Total	47.0	0.067	0.40	ug/l	50.0	0.425	93	70-130			
Strontium, Total	770	0.036	0.20	ug/l	50.0	674	192	70-130			MS-02
Matrix Spike Dup (W3J0698-MSD1)											
						Source: 3I25010-01 Prepared: 10/09/23 Analyzed: 10/10/23					
Aluminum, Total	1570	4.4	20	ug/l	50.0	1200	754	70-130	3	30	MS-02
Arsenic, Total	54.1	0.074	0.40	ug/l	50.0	3.22	102	70-130	1	30	
Barium, Total	115	0.14	1.0	ug/l	50.0	65.7	98	70-130	2	30	
Copper, Total	49.2	0.23	0.50	ug/l	50.0	2.17	94	70-130	0.7	30	
Lead, Total	50.9	0.083	0.20	ug/l	50.0	0.890	100	70-130	0.6	30	
Manganese, Total	244	0.23	1.0	ug/l	50.0	203	81	70-130	0.7	30	
Selenium, Total	50.1	0.067	0.40	ug/l	50.0	2.69	95	70-130	0.9	30	
Strontium, Total	1880	0.036	0.20	ug/l	50.0	1880	NR	70-130	0.3	30	MS-02
Matrix Spike Dup (W3J0698-MSD2)											
						Source: 3J04091-05 Prepared: 10/09/23 Analyzed: 10/10/23					
Aluminum, Total	437	4.4	20	ug/l	50.0	358	158	70-130	7	30	MS-02
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0	1.41	98	70-130	2	30	
Barium, Total	143	0.14	1.0	ug/l	50.0	92.2	102	70-130	1	30	
Copper, Total	59.1	0.23	0.50	ug/l	50.0	11.1	96	70-130	3	30	
Lead, Total	49.9	0.083	0.20	ug/l	50.0	1.08	98	70-130	2	30	
Manganese, Total	59.5	0.23	1.0	ug/l	50.0	11.8	95	70-130	3	30	
Selenium, Total	46.3	0.067	0.40	ug/l	50.0	0.425	92	70-130	2	30	
Strontium, Total	750	0.036	0.20	ug/l	50.0	674	152	70-130	3	30	MS-02

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike	Source	%REC		RPD		Qualifier
					Level	Result	%REC	Limits	RPD	Limit	

Batch: W3J0698 - EPA 200.8 (Continued)

Matrix Spike Dup (W3J0698-MSD2)

Source: 3J04091-05

Prepared: 10/09/23 Analyzed: 10/10/23

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike	Source	%REC		RPD		Qualifier
					Level	Result	%REC	Limits	RPD	Limit	

Batch: W3J0458 - SM 9221B

Blank (W3J0458-BLK1)

Prepared: 10/04/23 Analyzed: 10/11/23

Total Coliform	ND	1.8	1.8	MPN/100m							
----------------	----	-----	-----	----------	--	--	--	--	--	--	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1300 - EPA 537.1											
Blank (W3J1300-BLK1)											
Prepared: 10/16/23 Analyzed: 10/18/23											
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	39.3			ng/l	40.0		98	70-130			
13C2-PFHxA	39.5			ng/l	40.0		99	70-130			
d5-EtFOSAA	174			ng/l	160		109	70-130			
HFPO-DA-13C3	39.0			ng/l	40.0		98	70-130			
LCS (W3J1300-BS1)											
Prepared: 10/16/23 Analyzed: 10/18/23											
11CI-PF3OUdS	25.4	0.56	2.0	ng/l	20.0		127	70-130			
9CI-PF3ONS	25.3	0.53	2.0	ng/l	20.0		126	70-130			
ADONA	23.9	0.55	2.0	ng/l	20.0		119	70-130			
EtFOSAA	27.1	0.48	2.0	ng/l	20.0		136	70-130			Q-08
HFPO-DA	25.0	0.87	2.0	ng/l	20.0		125	70-130			
MeFOSAA	26.5	0.58	2.0	ng/l	20.0		133	70-130			Q-08
PFBS	25.6	0.58	2.0	ng/l	20.0		128	70-130			
PFDA	22.2	0.45	2.0	ng/l	20.0		111	70-130			
PFDoA	23.7	0.66	2.0	ng/l	20.0		118	70-130			
PFHpA	24.3	0.53	2.0	ng/l	20.0		122	70-130			
PFHxA	23.9	0.49	2.0	ng/l	20.0		120	70-130			
PFHxS	25.0	0.59	2.0	ng/l	20.0		125	70-130			
PFNA	24.3	0.52	2.0	ng/l	20.0		122	70-130			
PFOA	25.3	0.67	2.0	ng/l	20.0		126	70-130			
PFOS	24.2	0.53	2.0	ng/l	20.0		121	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1300 - EPA 537.1 (Continued)											
LCS (W3J1300-BS1)						Prepared: 10/16/23 Analyzed: 10/18/23					
PFTeDA	25.2	0.45	2.0	ng/l	20.0		126	70-130			
PFTTrDA	20.4	0.42	2.0	ng/l	20.0		102	70-130			
PFUnA	25.3	0.48	2.0	ng/l	20.0		127	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	40.1			ng/l	40.0		100	70-130			
13C2-PFHxA	41.3			ng/l	40.0		103	70-130			
d5-EtFOSAA	181			ng/l	160		113	70-130			
HFPO-DA-13C3	41.1			ng/l	40.0		103	70-130			
LCS Dup (W3J1300-BSD1)						Prepared: 10/16/23 Analyzed: 10/18/23					
11CI-PF3OUdS	25.1	0.56	2.0	ng/l	20.0		125	70-130	1	30	
9CI-PF3ONS	24.4	0.53	2.0	ng/l	20.0		122	70-130	3	30	
ADONA	19.7	0.55	2.0	ng/l	20.0		99	70-130	19	30	
EtFOSAA	26.0	0.48	2.0	ng/l	20.0		130	70-130	4	30	
HFPO-DA	21.3	0.87	2.0	ng/l	20.0		107	70-130	16	30	
MeFOSAA	26.7	0.58	2.0	ng/l	20.0		133	70-130	0.6	30	Q-08
PFBS	22.1	0.58	2.0	ng/l	20.0		110	70-130	15	30	
PFDA	21.5	0.45	2.0	ng/l	20.0		108	70-130	3	30	
PFDoA	23.1	0.66	2.0	ng/l	20.0		116	70-130	2	30	
PFHpA	20.4	0.53	2.0	ng/l	20.0		102	70-130	17	30	
PFHxA	20.5	0.49	2.0	ng/l	20.0		102	70-130	16	30	
PFHxS	21.4	0.59	2.0	ng/l	20.0		107	70-130	16	30	
PFNA	22.8	0.52	2.0	ng/l	20.0		114	70-130	7	30	
PFOA	22.1	0.67	2.0	ng/l	20.0		111	70-130	13	30	
PFOS	22.6	0.53	2.0	ng/l	20.0		113	70-130	7	30	
PFTeDA	24.9	0.45	2.0	ng/l	20.0		125	70-130	1	30	
PFTTrDA	20.4	0.42	2.0	ng/l	20.0		102	70-130	0.1	30	
PFUnA	24.3	0.48	2.0	ng/l	20.0		122	70-130	4	30	
<i>Surrogate(s)</i>											
13C2-PFDA	38.8			ng/l	40.0		97	70-130			
13C2-PFHxA	35.1			ng/l	40.0		88	70-130			
d5-EtFOSAA	177			ng/l	160		111	70-130			
HFPO-DA-13C3	34.9			ng/l	40.0		87	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0533 - EPA 524.2											
Blank (W3J0533-BLK1)						Prepared: 10/06/23 Analyzed: 10/07/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0533 - EPA 524.2 (Continued)											
Blank (W3J0533-BLK1)						Prepared: 10/06/23 Analyzed: 10/07/23					
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.2			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	43.5			ug/l	50.0		87	70-130			
LCS (W3J0533-BS1)						Prepared: 10/06/23 Analyzed: 10/07/23					
1,1,1,2-Tetrachloroethane	4.76	0.24	0.50	ug/l	5.00		95	70-130			
1,1,1-Trichloroethane	4.90	0.26	0.50	ug/l	5.00		98	70-130			
1,1,2,2-Tetrachloroethane	4.68	0.20	0.50	ug/l	5.00		94	70-130			
1,1,2-Trichloroethane	4.58	0.19	0.50	ug/l	5.00		92	70-130			
1,1-Dichloroethane	5.35	0.27	0.50	ug/l	5.00		107	70-130			
1,1-Dichloroethene	4.66	0.16	0.50	ug/l	5.00		93	70-130			
1,1-Dichloropropene	4.32	0.14	0.50	ug/l	5.00		86	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0533 - EPA 524.2 (Continued)											
LCS (W3J0533-BS1)											
						Prepared: 10/06/23 Analyzed: 10/07/23					
1,2,3-Trichlorobenzene	4.67	0.40	0.50	ug/l	5.00		93	70-130			
1,2,4-Trichlorobenzene	4.47	0.17	0.50	ug/l	5.00		89	70-130			
1,2,4-Trimethylbenzene	4.74	0.20	0.50	ug/l	5.00		95	70-130			
1,2-Dichloroethane	4.77	0.24	0.50	ug/l	5.00		95	70-130			
1,2-Dichloropropane	4.64	0.13	0.50	ug/l	5.00		93	70-130			
1,3,5-Trimethylbenzene	4.67	0.17	0.50	ug/l	5.00		93	70-130			
1,3-Dichloropropane	4.71	0.27	0.50	ug/l	5.00		94	70-130			
2,2-Dichloropropane	4.12	0.17	0.50	ug/l	5.00		82	70-130			
2-Butanone	4.70	1.5	5.0	ug/l	5.00		94	70-130			J
2-Chlorotoluene	4.96	0.15	0.50	ug/l	5.00		99	70-130			
2-Hexanone	4.94	1.2	5.0	ug/l	5.00		99	70-130			J
4-Chlorotoluene	4.95	0.15	0.50	ug/l	5.00		99	70-130			
4-Methyl-2-pentanone	4.65	1.8	5.0	ug/l	5.00		93	70-130			J
Benzene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.65	0.15	0.50	ug/l	5.00		93	70-130			
Bromochloromethane	4.92	0.15	0.50	ug/l	5.00		98	70-130			
Bromodichloromethane	4.74	0.24	0.50	ug/l	5.00		95	70-130			
Bromoform	4.59	0.38	0.50	ug/l	5.00		92	70-130			
Bromomethane	4.82	0.27	0.50	ug/l	5.00		96	70-130			
Carbon tetrachloride	4.58	0.27	0.50	ug/l	5.00		92	70-130			
Chlorobenzene	4.78	0.15	0.50	ug/l	5.00		96	70-130			
Chloroethane	4.88	0.17	0.50	ug/l	5.00		98	70-130			
Chloroform	5.19	0.27	0.50	ug/l	5.00		104	70-130			
Chloromethane	6.44	0.23	0.50	ug/l	5.00		129	70-130			
cis-1,2-Dichloroethene	4.92	0.25	0.50	ug/l	5.00		98	70-130			
cis-1,3-Dichloropropane	4.06	0.30	0.50	ug/l	5.00		81	70-130			
Dibromochloromethane	4.69	0.20	0.50	ug/l	5.00		94	70-130			
Dibromomethane	4.92	0.20	0.50	ug/l	5.00		98	70-130			
Dichlorodifluoromethane (Freon 12)	4.60	0.45	0.50	ug/l	5.00		92	70-130			
Di-isopropyl ether	20.5	1.1	2.0	ug/l	20.0		102	70-130			
Ethyl tert-butyl ether	20.6	1.0	2.0	ug/l	20.0		103	70-130			
Ethylbenzene	4.26	0.21	0.50	ug/l	5.00		85	70-130			
Freon 113	4.83	1.5	5.0	ug/l	5.00		97	70-130			J
Hexachlorobutadiene	4.22	0.40	0.50	ug/l	5.00		84	70-130			
Isopropylbenzene	4.40	0.18	0.50	ug/l	5.00		88	70-130			
m,p-Xylene	4.60	0.33	0.50	ug/l	5.00		92	70-130			
m-Dichlorobenzene	4.95	0.14	0.50	ug/l	5.00		99	70-130			
Methyl tert-butyl ether (MTBE)	20.5	0.94	2.0	ug/l	20.0		103	70-130			
Methylene chloride	5.36	0.30	0.50	ug/l	5.00		107	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0533 - EPA 524.2 (Continued)											
LCS (W3J0533-BS1)						Prepared: 10/06/23 Analyzed: 10/07/23					
Naphthalene	4.47	0.35	0.50	ug/l	5.00		89	70-130			
n-Butylbenzene	4.51	0.29	0.50	ug/l	5.00		90	70-130			
n-Propylbenzene	4.93	0.18	0.50	ug/l	5.00		99	70-130			
o-Dichlorobenzene	4.99	0.19	0.50	ug/l	5.00		100	70-130			
o-Xylene	4.91	0.20	0.50	ug/l	5.00		98	70-130			
p-Dichlorobenzene	4.95	0.18	0.50	ug/l	5.00		99	70-130			
p-Isopropyltoluene	4.65	0.25	0.50	ug/l	5.00		93	70-130			
sec-Butylbenzene	4.62	0.24	0.50	ug/l	5.00		92	70-130			
Styrene	4.71	0.19	0.50	ug/l	5.00		94	70-130			
Tert-amyl methyl ether	20.7	0.59	2.0	ug/l	20.0		103	70-130			
tert-Butylbenzene	4.44	0.18	0.50	ug/l	5.00		89	70-130			
Tetrachloroethene	4.51	0.18	0.50	ug/l	5.00		90	70-130			
Toluene	4.87	0.29	0.50	ug/l	5.00		97	70-130			
trans-1,2-Dichloroethene	5.18	0.26	0.50	ug/l	5.00		104	70-130			
trans-1,3-Dichloropropene	4.54	0.32	0.50	ug/l	5.00		91	70-130			
Trichloroethene	4.37	0.18	0.50	ug/l	5.00		87	70-130			
Trichlorofluoromethane	4.74	0.18	0.50	ug/l	5.00		95	70-130			
Vinyl chloride	6.21	0.18	0.50	ug/l	5.00		124	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.9			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	50.7			ug/l	50.0		101	70-130			
LCS Dup (W3J0533-BSD1)						Prepared: 10/06/23 Analyzed: 10/07/23					
1,1,1,2-Tetrachloroethane	4.37	0.24	0.50	ug/l	5.00		87	70-130	8	30	
1,1,1-Trichloroethane	4.68	0.26	0.50	ug/l	5.00		94	70-130	5	30	
1,1,2,2-Tetrachloroethane	4.72	0.20	0.50	ug/l	5.00		94	70-130	0.7	30	
1,1,2-Trichloroethane	4.42	0.19	0.50	ug/l	5.00		88	70-130	3	30	
1,1-Dichloroethane	5.98	0.27	0.50	ug/l	5.00		120	70-130	11	30	
1,1-Dichloroethene	4.60	0.16	0.50	ug/l	5.00		92	70-130	1	30	
1,1-Dichloropropene	3.78	0.14	0.50	ug/l	5.00		76	70-130	13	30	
1,2,3-Trichlorobenzene	4.23	0.40	0.50	ug/l	5.00		85	70-130	10	30	
1,2,4-Trichlorobenzene	4.07	0.17	0.50	ug/l	5.00		81	70-130	9	30	
1,2,4-Trimethylbenzene	4.47	0.20	0.50	ug/l	5.00		89	70-130	6	30	
1,2-Dichloroethane	4.51	0.24	0.50	ug/l	5.00		90	70-130	5	30	
1,2-Dichloropropane	4.32	0.13	0.50	ug/l	5.00		86	70-130	7	30	
1,3,5-Trimethylbenzene	4.39	0.17	0.50	ug/l	5.00		88	70-130	6	30	
1,3-Dichloropropane	4.55	0.27	0.50	ug/l	5.00		91	70-130	3	30	
2,2-Dichloropropane	4.29	0.17	0.50	ug/l	5.00		86	70-130	4	30	
2-Butanone	5.55	1.5	5.0	ug/l	5.00		111	70-130	17	30	
2-Chlorotoluene	4.64	0.15	0.50	ug/l	5.00		93	70-130	7	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0533 - EPA 524.2 (Continued)											
LCS Dup (W3J0533-BSD1)											
					Prepared: 10/06/23 Analyzed: 10/07/23						
2-Hexanone	4.51	1.2	5.0	ug/l	5.00		90	70-130	9	30	J
4-Chlorotoluene	4.69	0.15	0.50	ug/l	5.00		94	70-130	5	30	
4-Methyl-2-pentanone	4.46	1.8	5.0	ug/l	5.00		89	70-130	4	30	J
Benzene	4.27	0.15	0.50	ug/l	5.00		85	70-130	9	30	
Bromobenzene	4.41	0.15	0.50	ug/l	5.00		88	70-130	5	30	
Bromochloromethane	5.29	0.15	0.50	ug/l	5.00		106	70-130	7	30	
Bromodichloromethane	4.47	0.24	0.50	ug/l	5.00		89	70-130	6	30	
Bromoform	4.25	0.38	0.50	ug/l	5.00		85	70-130	8	30	
Bromomethane	5.03	0.27	0.50	ug/l	5.00		101	70-130	4	30	
Carbon tetrachloride	4.00	0.27	0.50	ug/l	5.00		80	70-130	14	30	
Chlorobenzene	4.51	0.15	0.50	ug/l	5.00		90	70-130	6	30	
Chloroethane	5.22	0.17	0.50	ug/l	5.00		104	70-130	7	30	
Chloroform	5.53	0.27	0.50	ug/l	5.00		111	70-130	6	30	
Chloromethane	6.05	0.23	0.50	ug/l	5.00		121	70-130	6	30	
cis-1,2-Dichloroethene	5.33	0.25	0.50	ug/l	5.00		107	70-130	8	30	
cis-1,3-Dichloropropene	3.84	0.30	0.50	ug/l	5.00		77	70-130	6	30	
Dibromochloromethane	4.41	0.20	0.50	ug/l	5.00		88	70-130	6	30	
Dibromomethane	4.58	0.20	0.50	ug/l	5.00		92	70-130	7	30	
Dichlorodifluoromethane (Freon 12)	4.32	0.45	0.50	ug/l	5.00		86	70-130	6	30	
Di-isopropyl ether	22.9	1.1	2.0	ug/l	20.0		114	70-130	11	30	
Ethyl tert-butyl ether	22.2	1.0	2.0	ug/l	20.0		111	70-130	7	30	
Ethylbenzene	3.89	0.21	0.50	ug/l	5.00		78	70-130	9	30	
Freon 113	4.56	1.5	5.0	ug/l	5.00		91	70-130	6	30	J
Hexachlorobutadiene	3.44	0.40	0.50	ug/l	5.00		69	70-130	20	30	Q-ME
Isopropylbenzene	4.02	0.18	0.50	ug/l	5.00		80	70-130	9	30	
m,p-Xylene	4.19	0.33	0.50	ug/l	5.00		84	70-130	9	30	
m-Dichlorobenzene	4.65	0.14	0.50	ug/l	5.00		93	70-130	6	30	
Methyl tert-butyl ether (MTBE)	24.0	0.94	2.0	ug/l	20.0		120	70-130	15	30	
Methylene chloride	6.42	0.30	0.50	ug/l	5.00		128	70-130	18	30	
Naphthalene	4.19	0.35	0.50	ug/l	5.00		84	70-130	6	30	
n-Butylbenzene	4.20	0.29	0.50	ug/l	5.00		84	70-130	7	30	
n-Propylbenzene	4.67	0.18	0.50	ug/l	5.00		93	70-130	6	30	
o-Dichlorobenzene	4.87	0.19	0.50	ug/l	5.00		97	70-130	2	30	
o-Xylene	4.44	0.20	0.50	ug/l	5.00		89	70-130	10	30	
p-Dichlorobenzene	4.63	0.18	0.50	ug/l	5.00		93	70-130	7	30	
p-Isopropyltoluene	4.35	0.25	0.50	ug/l	5.00		87	70-130	7	30	
sec-Butylbenzene	4.35	0.24	0.50	ug/l	5.00		87	70-130	6	30	
Styrene	4.40	0.19	0.50	ug/l	5.00		88	70-130	7	30	
Tert-amyl methyl ether	19.8	0.59	2.0	ug/l	20.0		99	70-130	4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W3J0533 - EPA 524.2 (Continued)												
LCS Dup (W3J0533-BSD1)					Prepared: 10/06/23 Analyzed: 10/07/23							
tert-Butylbenzene	4.13	0.18	0.50	ug/l	5.00		83	70-130	7	30		
Tetrachloroethene	3.90	0.18	0.50	ug/l	5.00		78	70-130	15	30		
Toluene	4.57	0.29	0.50	ug/l	5.00		91	70-130	6	30		
trans-1,2-Dichloroethene	5.61	0.26	0.50	ug/l	5.00		112	70-130	8	30		
trans-1,3-Dichloropropene	4.40	0.32	0.50	ug/l	5.00		88	70-130	3	30		
Trichloroethene	4.01	0.18	0.50	ug/l	5.00		80	70-130	9	30		
Trichlorofluoromethane	4.43	0.18	0.50	ug/l	5.00		89	70-130	7	30		
Vinyl chloride	5.94	0.18	0.50	ug/l	5.00		119	70-130	4	30		
<i>Surrogate(s)</i>												
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130				
4-Bromofluorobenzene	48.9			ug/l	50.0		98	70-130				

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/20/2023 16:48

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Using default temperature 20C for calculation
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
J	Estimated conc. detected <MRL and >MDL.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
Q-ME	Acceptable QC with marginal exceedance
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3504124**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED										SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com												<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER: Chris Kindle		SAMPLER: invoice to Rose Ford, Rford@BrwnCald.com												Charges will apply for weekends/holidays	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	140.1 Odor, 2120B Color	200.7/200.8 Total&Dissolved Metals*	alkalinity, TDS	300.0 Cl, F, SO4	300.1**	350.1 Ammonia, 350.2 NO2, NO3	365.3 PO4	Aggressive Index, CCP, LSI, Hardness	9215E TPC-Simplate	9221 MTFT	COMMENTS
	10/4/23	9:17	G	PT-SW8-S4	10	X	X	X	X	X	X	X	X	X	X	*Bacteriological Testing has a strict 8 hour holding time. Lab must receive the samples within 6 hours of collection to have sufficient time to prepare and incubate the samples before expiration.
																*Total Metals: B, Ca, Fe, K, Mg, Na, Silica, Al, As, Ba, Cu, Mn, Pb, Se, Sr
																*Dissolved Metals: Fe, Silica, Mn
																**300.1: Bromate, Bromide, Chlorate, Chlorite

RELINQUISHED BY 	DATE / TIME 10/4/23 1:30	RECEIVED BY 	DATE / TIME 10-04-23 1:30	SAMPLE CONDITION: Actual Temperature: 2.2 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY 	DATE / TIME 10/4/23 3:00 PM	RECEIVED BY 	DATE / TIME 10/4/23 15:10		
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



Sample Receipt Checklist

Week WKO: **3J04124**

Date/Time Received: 10/04/23 15:24

WKO Logged by: Jaime Gomez

of Samples: 01

Samples Checked by: Jaime Gomez

Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		2.2 °C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, if Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>		CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jaime Gomez

Date: 10/04/23

Work Orders: 3J04128

Report Date: 11/07/2023

Project: COSM 97-005

Received Date: 10/04/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

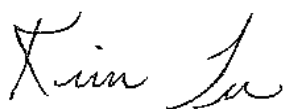
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/04/23 with the Chain-of-Custody document. The samples were received in good condition, at 9.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
Storm Drain 1	Client	3J04128-01	Water	10/04/23 09:00	
Storm Drain 2	Client	3J04128-02	Water	10/04/23 11:00	
Storm Drain 3	Client	3J04128-03	Water	10/04/23 13:00	
PT-SW8-S4	Client	3J04128-04	Water	10/04/23 09:17	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Sample Results

Sample: Storm Drain 1
 3J04128-01 (Water) Sampled: 10/04/23 9:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J0666		Preparation: EPA 508.1/SPE		Prepared: 10/09/23 08:49			Analyst: ajc
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/01/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/01/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/01/23	
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/01/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/01/23	
Aroclor 1016	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1221	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1232	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1242	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1248	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1254	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1260	ND	0.10	0.10	ug/l	1	11/01/23	R-01
beta-BHC	ND	0.0045	0.010	ug/l	1	11/01/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/01/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/01/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/01/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/01/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/01/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/01/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/01/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/01/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/01/23	
Heptachlor	ND	0.0031	0.010	ug/l	1	11/01/23	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/01/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/01/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/01/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 1
3J04128-01 (Water) Sampled: 10/04/23 9:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08				
Batch ID: W3J0666	Preparation: EPA 508.1/SPE	Prepared: 10/09/23 08:49				
		Analyst: ajc				
Kepone	ND	0.038	0.20 ug/l	1	11/01/23	
Methoxychlor	ND	0.0030	0.010 ug/l	1	11/01/23	
Mirex	ND	0.0030	0.010 ug/l	1	11/01/23	
PCBs, Total	ND	0.10	0.50 ug/l	1	11/01/23	R-01
Propachlor	ND	0.045	0.20 ug/l	1	11/01/23	
Toxaphene	ND	0.37	1.0 ug/l	1	11/01/23	
trans-Nonachlor	ND	0.0020	0.010 ug/l	1	11/01/23	
Trifluralin	ND	0.0043	0.010 ug/l	1	11/01/23	

Surrogate(s)

4,4-Dibromobiphenyl	105%	Conc: 0.104	70-130	11/01/23
---------------------	------	-------------	--------	----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15				
Batch ID: W3J0602	Preparation: _NONE (WETCHEM)	Prepared: 10/06/23 12:29				
		Analyst: mes				
Total Suspended Solids	0.5	5	mg/l	1	10/06/23	J

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06				
Batch ID: W3J0575	Preparation: EPA 200.2	Prepared: 10/06/23 15:12				
		Analyst: tyc				
Cadmium, Total	ND	0.042	0.20 ug/l	1	10/10/23	
Copper, Total	ND	0.23	0.50 ug/l	1	10/10/23	
Lead, Total	ND	0.083	0.20 ug/l	1	10/10/23	
Silver, Total	ND	0.055	0.20 ug/l	1	10/10/23	
Zinc, Total	ND	1.7	10 ug/l	1	10/10/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12				
Batch ID: W3J0458	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/04/23 16:50				
		Analyst: mdc				
Total Coliform	ND	1.8	1.8 MPN/100mL	1	10/06/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08				
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06				
		Analyst: ADM				
Tert-butyl alcohol	ND	0.45	2.0 ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	93%	Conc: 46.6	70-130	10/07/23
4-Bromofluorobenzene	91%	Conc: 45.6	70-130	10/07/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 2
3J04128-02 (Water) Sampled: 10/04/23 11:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J0666		Preparation: EPA 508.1/SPE		Prepared: 10/09/23 08:49		Analyst: ajc	
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/01/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/01/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/01/23	
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/01/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/01/23	
Aroclor 1016	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1221	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1232	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1242	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1248	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1254	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1260	ND	0.10	0.10	ug/l	1	11/01/23	R-01
beta-BHC	ND	0.0045	0.010	ug/l	1	11/01/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/01/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/01/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/01/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/01/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/01/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/01/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/01/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/01/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/01/23	
Heptachlor	ND	0.010	0.010	ug/l	1	11/01/23	R-01
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/01/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/01/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/01/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/07/2023 17:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 2
3J04128-02 (Water) Sampled: 10/04/23 11:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08					
Batch ID: W3J0666	Preparation: EPA 508.1/SPE	Prepared: 10/09/23 08:49		Analyst: ajc			
Kepone	ND	0.038	0.20	ug/l	1	11/01/23	
Methoxychlor	ND	0.0030	0.010	ug/l	1	11/01/23	
Mirex	ND	0.0030	0.010	ug/l	1	11/01/23	
PCBs, Total	ND	0.10	0.50	ug/l	1	11/01/23	R-01
Propachlor	ND	0.045	0.20	ug/l	1	11/01/23	
Toxaphene	ND	0.37	1.0	ug/l	1	11/01/23	
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/01/23	
Trifluralin	ND	0.0043	0.010	ug/l	1	11/01/23	

Surrogate(s)

4,4-Dibromobiphenyl	105%	Conc: 0.104	70-130			11/01/23	
---------------------	------	-------------	--------	--	--	----------	--

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15					
Batch ID: W3J0602	Preparation: _NONE (WETCHEM)	Prepared: 10/06/23 12:29		Analyst: mes			
Total Suspended Solids	ND		5	mg/l	1	10/06/23	

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06					
Batch ID: W3J0575	Preparation: EPA 200.2	Prepared: 10/06/23 15:12		Analyst: tyc			
Cadmium, Total	ND	0.042	0.20	ug/l	1	10/10/23	
Copper, Total	ND	0.23	0.50	ug/l	1	10/10/23	
Lead, Total	ND	0.083	0.20	ug/l	1	10/10/23	
Silver, Total	ND	0.055	0.20	ug/l	1	10/10/23	
Zinc, Total	ND	1.7	10	ug/l	1	10/10/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12					
Batch ID: W3J0458	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/04/23 16:50		Analyst: mdc			
Total Coliform	ND	1.8	1.8	MPN/100mL	1	10/06/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08					
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06		Analyst: ADM			
Tert-butyl alcohol	ND	0.45	2.0	ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 46.2	70-130			10/07/23	
4-Bromofluorobenzene	90%	Conc: 45.1	70-130			10/07/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 3
3J04128-03 (Water) Sampled: 10/04/23 13:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J0666		Preparation: EPA 508.1/SPE			Prepared: 10/09/23 08:49		Analyst: ajc
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/01/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/01/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/01/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/01/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/01/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/01/23	
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/01/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/01/23	
Aroclor 1016	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1221	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1232	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1242	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1248	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1254	ND	0.10	0.10	ug/l	1	11/01/23	R-01
Aroclor 1260	ND	0.10	0.10	ug/l	1	11/01/23	R-01
beta-BHC	ND	0.0045	0.010	ug/l	1	11/01/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/01/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/01/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/01/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/01/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/01/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/01/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/01/23	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/01/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/01/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/01/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/01/23	
Heptachlor	ND	0.0031	0.010	ug/l	1	11/01/23	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/01/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/01/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/01/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/07/2023 17:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 3
3J04128-03 (Water) Sampled: 10/04/23 13:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08					
Batch ID: W3J0666	Preparation: EPA 508.1/SPE	Prepared: 10/09/23 08:49		Analyst: ajc			
Kepone	ND	0.038	0.20	ug/l	1	11/01/23	
Methoxychlor	ND	0.0030	0.010	ug/l	1	11/01/23	
Mirex	ND	0.0030	0.010	ug/l	1	11/01/23	
PCBs, Total	ND	0.10	0.50	ug/l	1	11/01/23	R-01
Propachlor	ND	0.045	0.20	ug/l	1	11/01/23	
Toxaphene	ND	0.37	1.0	ug/l	1	11/01/23	
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/01/23	
Trifluralin	ND	0.0043	0.010	ug/l	1	11/01/23	

Surrogate(s)

4,4-Dibromobiphenyl	113%	Conc: 0.110	70-130			11/01/23	
---------------------	------	-------------	--------	--	--	----------	--

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15					
Batch ID: W3J0728	Preparation: _NONE (WETCHEM)	Prepared: 10/09/23 15:32		Analyst: mes			
Total Suspended Solids	0.3		5	mg/l	1	10/09/23	J

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06					
Batch ID: W3J0575	Preparation: EPA 200.2	Prepared: 10/06/23 15:12		Analyst: tyc			
Cadmium, Total	ND	0.042	0.20	ug/l	1	10/10/23	
Copper, Total	ND	0.23	0.50	ug/l	1	10/10/23	
Lead, Total	ND	0.083	0.20	ug/l	1	10/10/23	
Silver, Total	ND	0.055	0.20	ug/l	1	10/10/23	
Zinc, Total	ND	1.7	10	ug/l	1	10/10/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12					
Batch ID: W3J0458	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/04/23 16:50		Analyst: atd			
Total Coliform	ND	1.8	1.8	MPN/100mL	1	10/11/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08					
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06		Analyst: ADM			
Tert-butyl alcohol	ND	0.45	2.0	ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	98%	Conc: 48.9	70-130			10/07/23	
4-Bromofluorobenzene	91%	Conc: 45.3	70-130			10/07/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-SW8-S4
 3J04128-04 (Water) Sampled: 10/04/23 9:17 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B							
Batch ID: W3J1153	Preparation: _NONE (TOC/TOX)						
							Instr: TOC02
							Prepared: 10/12/23 14:34
Total Organic Carbon (TOC)	0.53	0.19	0.30	mg/l	1	10/13/23	Analyst: rem

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Quality Control Results

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W3J0666 - EPA 508.1												
Blank (W3J0666-BLK1)					Prepared: 10/09/23 Analyzed: 10/31/23							
2,4'-DDD	ND	0.0030	0.010	ug/l								
2,4'-DDE	ND	0.0030	0.010	ug/l								
2,4'-DDT	ND	0.0030	0.010	ug/l								
4,4'-DDD	ND	0.0030	0.010	ug/l								
4,4'-DDE	ND	0.0040	0.010	ug/l								
4,4'-DDT	ND	0.0030	0.010	ug/l								
Alachlor	ND	0.026	0.20	ug/l								
Aldrin	ND	0.0040	0.010	ug/l								
alpha-BHC	ND	0.0015	0.010	ug/l								
alpha-Chlordane	ND	0.0031	0.010	ug/l								
Aroclor 1016	ND	0.048	0.10	ug/l								
Aroclor 1221	ND	0.044	0.10	ug/l								
Aroclor 1232	ND	0.064	0.10	ug/l								
Aroclor 1242	ND	0.070	0.10	ug/l								
Aroclor 1248	ND	0.049	0.10	ug/l								
Aroclor 1254	ND	0.068	0.10	ug/l								
Aroclor 1260	ND	0.076	0.10	ug/l								
beta-BHC	ND	0.0045	0.010	ug/l								
Chlordane (tech)	ND	0.067	0.10	ug/l								
Chlorothalonil	ND	0.0040	0.050	ug/l								
cis-Nonachlor	ND	0.0030	0.010	ug/l								
delta-BHC	ND	0.0030	0.010	ug/l								
Dieldrin	ND	0.0030	0.010	ug/l								
Endosulfan I	ND	0.0030	0.010	ug/l								
Endosulfan II	ND	0.0019	0.010	ug/l								
Endosulfan sulfate	ND	0.0030	0.010	ug/l								
Endrin	ND	0.0030	0.010	ug/l								
Endrin aldehyde	ND	0.0040	0.010	ug/l								
Endrin ketone	ND	0.0042	0.010	ug/l								
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l								
gamma-Chlordane	ND	0.0074	0.010	ug/l								
Heptachlor	ND	0.0031	0.010	ug/l								
Heptachlor epoxide	ND	0.0019	0.010	ug/l								
Hexachlorobenzene	ND	0.0019	0.050	ug/l								
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l								
Kepone	ND	0.038	0.20	ug/l								
Methoxychlor	ND	0.0030	0.010	ug/l								
Mirex	ND	0.0030	0.010	ug/l								
PCBs, Total	ND	0.048	0.50	ug/l								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0666 - EPA 508.1 (Continued)											
Blank (W3J0666-BLK1)						Prepared: 10/09/23 Analyzed: 10/31/23					
Propachlor	ND	0.045	0.20	ug/l							
Toxaphene	ND	0.37	1.0	ug/l							
trans-Nonachlor	ND	0.0020	0.010	ug/l							
Trifluralin	ND	0.0043	0.010	ug/l							
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.126			ug/l	0.100		126	70-130			
LCS (W3J0666-BS1)						Prepared: 10/09/23 Analyzed: 10/31/23					
4,4'-DDD	0.102	0.0030	0.010	ug/l	0.100		102	70-130			
4,4'-DDE	0.0918	0.0040	0.010	ug/l	0.100		92	70-130			
4,4'-DDT	0.0932	0.0030	0.010	ug/l	0.100		93	70-130			
Aldrin	0.0938	0.0040	0.010	ug/l	0.100		94	70-130			
alpha-BHC	0.0983	0.0015	0.010	ug/l	0.100		98	70-130			
alpha-Chlordane	0.101	0.0031	0.010	ug/l	0.100		101	70-130			
beta-BHC	0.0944	0.0045	0.010	ug/l	0.100		94	70-130			
delta-BHC	0.0962	0.0030	0.010	ug/l	0.100		96	70-130			
Dieldrin	0.0930	0.0030	0.010	ug/l	0.100		93	70-130			
Endosulfan I	0.0862	0.0030	0.010	ug/l	0.100		86	70-130			
Endosulfan II	0.0924	0.0019	0.010	ug/l	0.100		92	70-130			
Endosulfan sulfate	0.109	0.0030	0.010	ug/l	0.100		109	70-130			
Endrin	0.0842	0.0030	0.010	ug/l	0.100		84	70-130			
Endrin aldehyde	0.0791	0.0040	0.010	ug/l	0.100		79	70-130			
Endrin ketone	0.113	0.0042	0.010	ug/l	0.100		113	70-130			
gamma-BHC (Lindane)	0.0975	0.0030	0.010	ug/l	0.100		97	70-130			
gamma-Chlordane	0.103	0.0074	0.010	ug/l	0.100		103	70-130			
Heptachlor	0.0963	0.0031	0.010	ug/l	0.100		96	70-130			
Heptachlor epoxide	0.101	0.0019	0.010	ug/l	0.100		101	70-130			
Methoxychlor	0.103	0.0030	0.010	ug/l	0.100		103	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.112			ug/l	0.100		112	70-130			
LCS (W3J0666-BS2)						Prepared: 10/09/23 Analyzed: 10/31/23					
Aroclor 1016	1.24	0.048	0.10	ug/l	1.00		124	70-130			
Aroclor 1260	0.970	0.076	0.10	ug/l	1.00		97	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.115			ug/l	0.100		115	70-130			
LCS Dup (W3J0666-BSD1)						Prepared: 10/09/23 Analyzed: 10/31/23					
4,4'-DDD	0.103	0.0030	0.010	ug/l	0.100		103	70-130	0.9	30	
4,4'-DDE	0.0909	0.0040	0.010	ug/l	0.100		91	70-130	1	30	
4,4'-DDT	0.0935	0.0030	0.010	ug/l	0.100		93	70-130	0.4	30	
Aldrin	0.0942	0.0040	0.010	ug/l	0.100		94	70-130	0.4	30	
alpha-BHC	0.102	0.0015	0.010	ug/l	0.100		102	70-130	4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source		%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit		
Batch: W3J0666 - EPA 508.1 (Continued)												
LCS Dup (W3J0666-bsd1)					Prepared: 10/09/23 Analyzed: 10/31/23							
alpha-Chlordane	0.103	0.0031	0.010	ug/l	0.100		103	70-130	2	30		
beta-BHC	0.0973	0.0045	0.010	ug/l	0.100		97	70-130	3	30		
delta-BHC	0.0967	0.0030	0.010	ug/l	0.100		97	70-130	0.5	30		
Dieldrin	0.0950	0.0030	0.010	ug/l	0.100		95	70-130	2	30		
Endosulfan I	0.0893	0.0030	0.010	ug/l	0.100		89	70-130	4	30		
Endosulfan II	0.0945	0.0019	0.010	ug/l	0.100		94	70-130	2	30		
Endosulfan sulfate	0.108	0.0030	0.010	ug/l	0.100		108	70-130	0.9	30		
Endrin	0.0966	0.0030	0.010	ug/l	0.100		97	70-130	14	30		
Endrin aldehyde	0.0882	0.0040	0.010	ug/l	0.100		88	70-130	11	30		
Endrin ketone	0.111	0.0042	0.010	ug/l	0.100		111	70-130	2	30		
gamma-BHC (Lindane)	0.101	0.0030	0.010	ug/l	0.100		101	70-130	4	30		
gamma-Chlordane	0.105	0.0074	0.010	ug/l	0.100		105	70-130	2	30		
Heptachlor	0.0998	0.0031	0.010	ug/l	0.100		100	70-130	4	30		
Heptachlor epoxide	0.105	0.0019	0.010	ug/l	0.100		105	70-130	4	30		
Methoxychlor	0.104	0.0030	0.010	ug/l	0.100		104	70-130	1	30		
<i>Surrogate(s)</i>												
4,4-Dibromobiphenyl	0.115			ug/l	0.100		115	70-130				

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/07/2023 17:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0602 - SM 2540D											
Blank (W3J0602-BLK1)											
Total Suspended Solids	1.00		5	mg/l							J
Prepared & Analyzed: 10/06/23											
LCS (W3J0602-BS1)											
Total Suspended Solids	67.0		5	mg/l	61.4		109	90-110			
Prepared & Analyzed: 10/06/23											
Duplicate (W3J0602-DUP1)											
Total Suspended Solids	17.3		5	mg/l		17.3			0	10	
Source: 3J03055-01											
Prepared & Analyzed: 10/06/23											
Duplicate (W3J0602-DUP2)											
Total Suspended Solids	44.0		5	mg/l		48.0			9	10	
Source: 3J04089-01											
Prepared & Analyzed: 10/06/23											
Batch: W3J0728 - SM 2540D											
Blank (W3J0728-BLK1)											
Total Suspended Solids	ND		5	mg/l							
Prepared & Analyzed: 10/09/23											
LCS (W3J0728-BS1)											
Total Suspended Solids	60.2		5	mg/l	56.8		106	90-110			
Prepared & Analyzed: 10/09/23											
Duplicate (W3J0728-DUP1)											
Total Suspended Solids	78.7		5	mg/l		82.0			4	10	
Source: 3J05017-01											
Prepared & Analyzed: 10/09/23											
Duplicate (W3J0728-DUP2)											
Total Suspended Solids	428		5	mg/l		418			2	10	
Source: 3J05108-01											
Prepared & Analyzed: 10/09/23											
Batch: W3J1153 - SM 5310B											
Blank (W3J1153-BLK1)											
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							
Prepared & Analyzed: 10/12/23											
LCS (W3J1153-BS1)											
Total Organic Carbon (TOC)	0.949	0.19	0.30	mg/l	1.00		95	85-115			
Prepared & Analyzed: 10/12/23											
Matrix Spike (W3J1153-MS1)											
Total Organic Carbon (TOC)	9.74	0.19	0.30	mg/l	5.00	4.77	99	76-115			
Source: 3I20001-01											
Prepared & Analyzed: 10/12/23											
Matrix Spike Dup (W3J1153-MSD1)											
Total Organic Carbon (TOC)	9.56	0.19	0.30	mg/l	5.00	4.77	96	76-115	2	20	
Source: 3I20001-01											
Prepared & Analyzed: 10/12/23											

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0575 - EPA 200.8											
Blank (W3J0575-BLK1)											
					Prepared: 10/06/23 Analyzed: 10/10/23						
Cadmium, Total	ND	0.042	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Silver, Total	ND	0.055	0.20	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W3J0575-BS1)											
					Prepared: 10/06/23 Analyzed: 10/10/23						
Cadmium, Total	49.6	0.042	0.20	ug/l	50.0		99	85-115			
Copper, Total	52.1	0.23	0.50	ug/l	50.0		104	85-115			
Lead, Total	50.3	0.083	0.20	ug/l	50.0		100	85-115			
Silver, Total	51.7	0.055	0.20	ug/l	50.0		103	85-115			
Zinc, Total	52.1	1.7	10	ug/l	50.0		104	85-115			
Matrix Spike (W3J0575-MS1)											
			Source: 3J04087-01			Prepared: 10/06/23 Analyzed: 10/10/23					
Cadmium, Total	48.9	0.042	0.20	ug/l	50.0	ND	98	70-130			
Copper, Total	52.8	0.23	0.50	ug/l	50.0	0.772	104	70-130			
Lead, Total	49.3	0.083	0.20	ug/l	50.0	ND	99	70-130			
Silver, Total	50.7	0.055	0.20	ug/l	50.0	ND	101	70-130			
Zinc, Total	51.7	1.7	10	ug/l	50.0	ND	103	70-130			
Matrix Spike (W3J0575-MS2)											
			Source: 3J04087-04			Prepared: 10/06/23 Analyzed: 10/10/23					
Cadmium, Total	49.3	0.042	0.20	ug/l	50.0	ND	98	70-130			
Copper, Total	52.7	0.23	0.50	ug/l	50.0	0.951	103	70-130			
Lead, Total	49.4	0.083	0.20	ug/l	50.0	ND	99	70-130			
Silver, Total	51.1	0.055	0.20	ug/l	50.0	ND	102	70-130			
Zinc, Total	51.6	1.7	10	ug/l	50.0	ND	103	70-130			
Matrix Spike Dup (W3J0575-MSD1)											
			Source: 3J04087-01			Prepared: 10/06/23 Analyzed: 10/10/23					
Cadmium, Total	49.7	0.042	0.20	ug/l	50.0	ND	99	70-130	2	30	
Copper, Total	54.0	0.23	0.50	ug/l	50.0	0.772	106	70-130	2	30	
Lead, Total	49.8	0.083	0.20	ug/l	50.0	ND	100	70-130	0.9	30	
Silver, Total	51.7	0.055	0.20	ug/l	50.0	ND	103	70-130	2	30	
Zinc, Total	51.9	1.7	10	ug/l	50.0	ND	104	70-130	0.5	30	
Matrix Spike Dup (W3J0575-MSD2)											
			Source: 3J04087-04			Prepared: 10/06/23 Analyzed: 10/10/23					
Cadmium, Total	48.9	0.042	0.20	ug/l	50.0	ND	98	70-130	0.8	30	
Copper, Total	52.8	0.23	0.50	ug/l	50.0	0.951	104	70-130	0.06	30	
Lead, Total	49.2	0.083	0.20	ug/l	50.0	ND	98	70-130	0.4	30	
Silver, Total	51.0	0.055	0.20	ug/l	50.0	ND	102	70-130	0.2	30	
Zinc, Total	51.4	1.7	10	ug/l	50.0	ND	103	70-130	0.4	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0458 - SM 9221B											
Blank (W3J0458-BLK1)											
Total Coliform	ND	1.8	1.8	MPN/100m L							

Prepared: 10/04/23 Analyzed: 10/11/23

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0533 - EPA 524.2											
Blank (W3J0533-BLK1)											
Tert-butyl alcohol	ND	0.45	2.0	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.2			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	43.5			ug/l	50.0		87	70-130			
LCS (W3J0533-BS1)											
Tert-butyl alcohol	20.7	0.45	2.0	ug/l	20.0		103	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.9			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	50.7			ug/l	50.0		101	70-130			
LCS Dup (W3J0533-BSD1)											
Tert-butyl alcohol	20.0	0.45	2.0	ug/l	20.0		100	70-130	3	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	48.9			ug/l	50.0		98	70-130			

Prepared: 10/06/23 Analyzed: 10/07/23

Prepared: 10/06/23 Analyzed: 10/07/23

Prepared: 10/06/23 Analyzed: 10/07/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/07/2023 17:18

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
R-01	The MDL and/or MRL for this analyte has been raised to account for matrix interference.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3504128**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED							SPECIAL HANDLING							
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com invoice to Rose Ford, Rford@BrwnCald.com		200-7-Fe-Total-and-Dissolved	200-8-Mn-Total-and-Dissolved	200-8 (Ag, Cd, Cu, Pb, Tm)	2540DSM-solids, TS	508 - with EXT	524.2 - w TBA	9221BSM#MTFT	TOC	<input type="checkbox"/> Same Day Rush 160%	<input type="checkbox"/> 24 Hour Rush 100%	<input type="checkbox"/> 48-72 Hour Rush 75%	<input type="checkbox"/> 4 - 5 Day Rush 30%	<input type="checkbox"/> Rush Extractions 50%	<input type="checkbox"/> 10 - 15 Business Days	<input type="checkbox"/> QA/QC Data Package
PROJECT MANAGER Chris Kindle		SAMPLER									Charges will apply for weekends/holidays							
ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.							Method of Shipment:		COMMENTS				
	10/4/23	9:00	G	Storm Drain 1	8			X	X	X	X							
	10/4/23	11:00	G	Storm Drain 2	8			X	X	X	X							
	10/4/23	13:00	G	Storm Drain 3	8			X	X	X	X							
	10/4/23	9:17	G	PT-SW 8-84	2							X						

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/4/23 1:30	RECEIVED BY <i>[Signature]</i>	DATE / TIME 10-04-23 1:30	SAMPLE CONDITION: Actual Temperature: 9.8 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous Sl = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste Ot = O2 OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10-04-23 3:00 PM	RECEIVED BY <i>[Signature]</i>	DATE / TIME 10/4/23 15:10		
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.

COC Revision 04/2016



Sample Receipt Checklist

Weck WKO: 3104128

Date/Time Received: 10/04/23 15:10

WKO Logged by: Jaime Gomez

of Samples: 04

Samples Checked by: Jaime Gomez

Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		9.8 °C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, if Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>		CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot#
pH adjusted for O&G	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH Reading
				Add Lot#
				Amt added:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jaime Gomez

Date: 10/04/23

Work Orders: 3J05115

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/08/2023

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

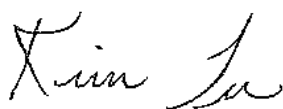
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-SW9-S4	Client	3J05115-01	Water	10/05/23 08:50	
PT-SW10-S4	Client	3J05115-02	Water	10/05/23 13:10	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
AWWA in Water Aggressive Index		✓	
SM 9215E in Water Heterotrophic Plate Count		✓	
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-SW9-S4
3J05115-01 (Water) Sampled: 10/05/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W3J0542		Preparation: _NONE (LC)		Prepared: 10/06/23 08:07		Analyst: CLL	
Chloride, Total	130	0.19	0.50	mg/l	1	10/06/23	
Fluoride, Total	0.30	0.0090	0.10	mg/l	1	10/06/23	

Anions by IC, EPA Method 300.1							
Method: EPA 300.1			Instr: LC08_Channel2				
Batch ID: W3J1288		Preparation: _NONE (LC)		Prepared: 10/16/23 09:58		Analyst: CLL	
Chlorate	91	1.7	10	ug/l	1	10/17/23	
Chlorite	ND	2.2	10	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
Dichloroacetate	102%	Conc: 511	90-115			10/17/23	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: AWWA			Instr: [CALC]				
Batch ID: W3J1453		Preparation: _NONE (METALS)		Prepared: 10/17/23 12:59		Analyst: aln	
Aggressive Index	12.3			AGI	1	10/17/23	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W3J0523		Preparation: _NONE (WETCHEM)		Prepared: 10/05/23 17:37		Analyst: bel	
Threshold Odor Number	1.0		1.0	T.O.N.	1	10/05/23 19:23	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W3J1122		Preparation: _NONE (WETCHEM)		Prepared: 10/12/23 10:17		Analyst: AEC	
Ammonia as N	0.024	0.017	0.10	mg/l	1	10/13/23	J
Method: EPA 353.2			Instr: AA01				
Batch ID: W3J0576		Preparation: _NONE (WETCHEM)		Prepared: 10/06/23 11:18		Analyst: ISM	
Nitrate as N	5.7	0.040	0.20	mg/l	1	10/06/23 12:51	
Nitrite as N	ND	42	100	ug/l	1	10/06/23 12:51	
Method: EPA 365.3			Instr: UVVIS04				
Batch ID: W3J1800		Preparation: _NONE (WETCHEM)		Prepared: 10/20/23 10:18		Analyst: ymt/rob	
Phosphorus as PO4, Total	0.35	0.021	0.030	mg/l	1	10/24/23	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W3J0627		Preparation: _NONE (WETCHEM)		Prepared: 10/06/23 17:35		Analyst: kac	
Color	ND		3.0	Color Units	1	10/06/23 17:56	
Method: SM 2320B			Instr: AA02				
Batch ID: W3J0621		Preparation: _NONE (WETCHEM)		Prepared: 10/09/23 14:31		Analyst: mes	
Alkalinity as CaCO3	380	7.2	20	mg/l	1	10/10/23	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W3J1461		Preparation: _NONE (METALS)		Prepared: 10/17/23 13:50		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	56.5	-100	-100	N/A	1	10/17/23	A-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW9-S4
3J05115-01 (Water) Sampled: 10/05/23 8:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W3J1489	Preparation: _NONE (METALS)			Prepared: 10/17/23 15:56		Analyst: aln	
Langelier Index @ 20 C	0.339	-20.0	-10.0	LSI	1	10/17/23	
Langelier Index @ 60 C	0.848	-20.0	-10.0	LSI	1	10/17/23	
Method: SM 2540C				Instr: OVEN17			
Batch ID: W3J0529	Preparation: _NONE (WETCHEM)			Prepared: 10/05/23 19:28		Analyst: bel	
Total Dissolved Solids	1100	4.0	10	mg/l	1	10/06/23	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W3J0619	Preparation: _NONE (WETCHEM)			Prepared: 10/06/23 15:45		Analyst: mes	
pH	7.17	0.10	0.10	pH Units	1	10/06/23 20:01	*
Hexavalent Chromium by IC							
Method: EPA 218.6				Instr: LC13			
Batch ID: W3J1089	Preparation: _NONE (LC)			Prepared: 10/12/23 08:21		Analyst: CLL	
Chromium 6+	0.67	0.0079	0.020	ug/l	1	10/12/23	
Metals by EPA 200 Series Methods							
Method: Calculation				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 10/12/23 09:44		Analyst: kvm	
Hardness as CaCO3, Total	639	0.221	3.31	mg/l	1	10/16/23	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W3J1112	Preparation: EPA 200.2			Prepared: 10/12/23 09:44		Analyst: kvm	
Boron, Total	130	3.0	10	ug/l	1	10/16/23	
Calcium, Total	142	0.0240	0.500	mg/l	1	10/16/23	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/16/23	
Iron, Total	0.065	0.0065	0.030	mg/l	1	10/16/23	
Magnesium, Total	68.9	0.0390	0.500	mg/l	1	10/16/23	
Potassium, Total	3.1	0.086	0.50	mg/l	1	10/16/23	
Silica as SiO2, Dissolved	35	0.0086	0.10	mg/l	1	10/16/23	
Silica as SiO2, Total	36	0.0086	0.10	mg/l	1	10/16/23	
Sodium, Total	87	0.13	1.0	mg/l	1	10/16/23	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W3J1114	Preparation: EPA 200.2			Prepared: 10/12/23 15:33		Analyst: tyc	
Aluminum, Total	24	4.4	20	ug/l	1	10/16/23	
Arsenic, Total	0.71	0.074	0.40	ug/l	1	10/16/23	
Barium, Total	59	0.14	1.0	ug/l	1	10/16/23	
Copper, Total	0.24	0.23	0.50	ug/l	1	10/16/23	J
Lead, Total	ND	0.083	0.20	ug/l	1	10/16/23	
Manganese, Dissolved	6.2	0.11	1.0	ug/l	1	10/16/23	
Manganese, Total	11	0.23	1.0	ug/l	1	10/16/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW9-S4
3J05115-01 (Water) Sampled: 10/05/23 8:50 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W3J1114		Preparation: EPA 200.2		Prepared: 10/12/23 15:33		Analyst: tyc	
Selenium, Total	4.4	0.067	0.40	ug/l	1	10/16/23	
Strontium, Total	780	0.036	0.20	ug/l	1	10/16/23	

Microbiological Parameters by Standard Methods

Method: SM 9215E			Instr: INC06				
Batch ID: W3J0596		Preparation: _NONE (MICROBIOLOGY)		Prepared: 10/05/23 17:14		Analyst: mdc	
Heterotrophic Plate Count	>=740	2.0	2.0	MPN/mL	1	10/07/23	O-15
Method: SM 9221B			Instr: INC12				
Batch ID: W3J0595		Preparation: _NONE (MICROBIOLOGY)		Prepared: 10/05/23 17:30		Analyst: atd	
Total Coliform	13	1.8	1.8	MPN/100mL	1	10/11/23	O-15

Sample Results

(Continued)

Sample: PT-SW9-S4
3J05115-01RE1 (Water) Sampled: 10/05/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W3J0542		Preparation: _NONE (LC)		Prepared: 10/06/23 08:07		Analyst: CLL	
Sulfate as SO4	290	0.72	1.5	mg/l	3	10/07/23	
Anions by IC, EPA Method 300.1							
Method: EPA 300.1			Instr: LC08_Channel2				
Batch ID: W3J1288		Preparation: _NONE (LC)		Prepared: 10/16/23 09:58		Analyst: CLL	
Bromate	ND	7.0	25	ug/l	5	10/17/23	M-05
Bromide	780	8.5	50	ug/l	5	10/17/23	M-06
<i>Surrogate(s)</i>							
Dichloroacetate	102%	Conc: 511	90-115			10/17/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:32

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW10-S4
3J05115-02 (Water) Sampled: 10/05/23 13:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W3J0542	Preparation: _NONE (LC)		Prepared: 10/06/23 08:07		Analyst: CLL		
Chloride, Total	140	0.19	0.50	mg/l	1	10/06/23	
Fluoride, Total	0.37	0.0090	0.10	mg/l	1	10/06/23	
Anions by IC, EPA Method 300.1							
Method: EPA 300.1			Instr: LC08_Channel2				
Batch ID: W3J1288	Preparation: _NONE (LC)		Prepared: 10/16/23 09:58		Analyst: CLL		
Chlorate	99	1.7	10	ug/l	1	10/17/23	
Chlorite	ND	2.2	10	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
Dichloroacetate	96%	Conc: 479	90-115			10/17/23	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W3J1453	Preparation: _NONE (METALS)		Prepared: 10/17/23 12:59		Analyst: aln		
Aggressive Index	12.5			AGI	1	10/17/23	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W3J0523	Preparation: _NONE (WETCHEM)		Prepared: 10/05/23 17:37		Analyst: bel		
Threshold Odor Number	1.0		1.0	T.O.N.	1	10/05/23 19:23	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W3J1122	Preparation: _NONE (WETCHEM)		Prepared: 10/12/23 10:17		Analyst: AEC		
Ammonia as N	0.019	0.017	0.10	mg/l	1	10/13/23	J
Method: EPA 353.2			Instr: AA01				
Batch ID: W3J0576	Preparation: _NONE (WETCHEM)		Prepared: 10/06/23 11:18		Analyst: ISM		
Nitrate as N	4.2	0.040	0.20	mg/l	1	10/06/23 12:56	
Nitrite as N	ND	42	100	ug/l	1	10/06/23 12:56	
Method: EPA 365.3			Instr: UVVIS04				
Batch ID: W3J1800	Preparation: _NONE (WETCHEM)		Prepared: 10/20/23 10:18		Analyst: ymt/rob		
Phosphorus as PO4, Total	0.37	0.021	0.030	mg/l	1	10/24/23	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W3J0627	Preparation: _NONE (WETCHEM)		Prepared: 10/06/23 17:35		Analyst: kac		
Color	ND		3.0	Color Units	1	10/06/23 17:56	
Method: SM 2320B			Instr: AA02				
Batch ID: W3J0621	Preparation: _NONE (WETCHEM)		Prepared: 10/09/23 14:31		Analyst: mes		
Alkalinity as CaCO3	420	7.2	20	mg/l	1	10/10/23	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W3J1461	Preparation: _NONE (METALS)		Prepared: 10/17/23 13:50		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	84.6	-100	-100	N/A	1	10/17/23	A-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW10-S4
3J05115-02 (Water) Sampled: 10/05/23 13:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W3J1489	Preparation: _NONE (METALS)			Prepared: 10/17/23 15:56		Analyst: aln	
Langelier Index @ 20 C	0.482	-20.0	-10.0	LSI	1	10/17/23	
Langelier Index @ 60 C	0.989	-20.0	-10.0	LSI	1	10/17/23	
Method: SM 2540C				Instr: OVEN17			
Batch ID: W3J0755	Preparation: _NONE (WETCHEM)			Prepared: 10/09/23 17:57		Analyst: bel	
Total Dissolved Solids	1200	4.0	10	mg/l	1	10/10/23	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W3J0619	Preparation: _NONE (WETCHEM)			Prepared: 10/06/23 15:45		Analyst: mes	
pH	7.20	0.10	0.10	pH Units	1	10/06/23 20:07	*
Hexavalent Chromium by IC							
Method: EPA 218.6				Instr: LC13			
Batch ID: W3J1089	Preparation: _NONE (LC)			Prepared: 10/12/23 08:21		Analyst: CLL	
Chromium 6+	0.28	0.0079	0.020	ug/l	1	10/12/23	
Metals by EPA 200 Series Methods							
Method: Calculation				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 10/12/23 09:44		Analyst: kvm	
Hardness as CaCO3, Total	776	0.221	3.31	mg/l	1	10/16/23	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W3J1112	Preparation: EPA 200.2			Prepared: 10/12/23 09:44		Analyst: kvm	
Boron, Total	120	3.0	10	ug/l	1	10/16/23	
Calcium, Total	171	0.0240	0.500	mg/l	1	10/16/23	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/16/23	
Iron, Total	0.031	0.0065	0.030	mg/l	1	10/16/23	
Magnesium, Total	85.0	0.0390	0.500	mg/l	1	10/16/23	
Potassium, Total	3.2	0.086	0.50	mg/l	1	10/16/23	
Silica as SiO2, Dissolved	32	0.0086	0.10	mg/l	1	10/16/23	
Silica as SiO2, Total	32	0.0086	0.10	mg/l	1	10/16/23	
Sodium, Total	71	0.13	1.0	mg/l	1	10/16/23	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W3J1114	Preparation: EPA 200.2			Prepared: 10/12/23 15:33		Analyst: tyc	
Aluminum, Total	9.9	4.4	20	ug/l	1	10/16/23	J
Arsenic, Total	0.67	0.074	0.40	ug/l	1	10/16/23	
Barium, Total	34	0.14	1.0	ug/l	1	10/16/23	
Copper, Total	0.28	0.23	0.50	ug/l	1	10/16/23	J
Lead, Total	ND	0.083	0.20	ug/l	1	10/16/23	
Manganese, Dissolved	0.58	0.11	1.0	ug/l	1	10/16/23	J
Manganese, Total	2.2	0.23	1.0	ug/l	1	10/16/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW10-S4
3J05115-02 (Water) Sampled: 10/05/23 13:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W3J1114		Preparation: EPA 200.2		Prepared: 10/12/23 15:33		Analyst: tyc	
Selenium, Total	4.9	0.067	0.40	ug/l	1	10/16/23	
Strontium, Total	940	0.036	0.20	ug/l	1	10/16/23	

Microbiological Parameters by Standard Methods

Method: SM 9215E			Instr: INC06				
Batch ID: W3J0596		Preparation: _NONE (MICROBIOLOGY)		Prepared: 10/05/23 17:14		Analyst: mdc	
Heterotrophic Plate Count	>=740	2.0	2.0	MPN/mL	1	10/07/23	
Method: SM 9221B			Instr: INC12				
Batch ID: W3J0595		Preparation: _NONE (MICROBIOLOGY)		Prepared: 10/05/23 17:30		Analyst: atd	
Total Coliform	ND	1.8	1.8	MPN/100mL	1	10/11/23	

Sample Results

(Continued)

Sample: PT-SW10-S4
3J05115-02RE1 (Water) Sampled: 10/05/23 13:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W3J0542		Preparation: _NONE (LC)		Prepared: 10/06/23 08:07		Analyst: CLL	
Sulfate as SO4	320	0.96	2.0	mg/l	4	10/07/23	
Anions by IC, EPA Method 300.1							
Method: EPA 300.1			Instr: LC08_Channel2				
Batch ID: W3J1288		Preparation: _NONE (LC)		Prepared: 10/16/23 09:58		Analyst: CLL	
Bromate	ND	7.0	25	ug/l	5	10/17/23	M-05
Bromide	940	8.5	50	ug/l	5	10/17/23	M-06
<i>Surrogate(s)</i>							
Dichloroacetate	115%	Conc: 574	90-115			10/17/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0542 - EPA 300.0											
Blank (W3J0542-BLK1)					Prepared & Analyzed: 10/06/23						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W3J0542-BS1)					Prepared & Analyzed: 10/06/23						
Chloride, Total	20.9	0.19	0.50	mg/l	20.0		105	90-110			
Fluoride, Total	1.96	0.0090	0.10	mg/l	2.00		98	90-110			
Sulfate as SO4	20.6	0.24	0.50	mg/l	20.0		103	90-110			
Matrix Spike (W3J0542-MS1)					Source: 3118003-01		Prepared: 10/06/23 Analyzed: 10/07/23				
Chloride, Total	383	1.9	5.0	mg/l	200	160	112	76-118			
Fluoride, Total	20.5	0.090	1.0	mg/l	20.0	0.542	100	86-107			
Sulfate as SO4	330	2.4	5.0	mg/l	200	113	109	78-111			
Matrix Spike (W3J0542-MS2)					Source: 3118003-04		Prepared: 10/06/23 Analyzed: 10/07/23				
Chloride, Total	301	1.9	5.0	mg/l	200	87.1	107	76-118			
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.708	100	86-107			
Sulfate as SO4	262	2.4	5.0	mg/l	200	51.4	105	78-111			
Matrix Spike Dup (W3J0542-MSD1)					Source: 3118003-01		Prepared: 10/06/23 Analyzed: 10/07/23				
Chloride, Total	383	1.9	5.0	mg/l	200	160	111	76-118	0.05	20	
Fluoride, Total	20.5	0.090	1.0	mg/l	20.0	0.542	100	86-107	0.1	20	
Sulfate as SO4	330	2.4	5.0	mg/l	200	113	109	78-111	0.05	20	
Matrix Spike Dup (W3J0542-MSD2)					Source: 3118003-04		Prepared: 10/06/23 Analyzed: 10/07/23				
Chloride, Total	302	1.9	5.0	mg/l	200	87.1	107	76-118	0.1	20	
Fluoride, Total	20.3	0.090	1.0	mg/l	20.0	0.708	98	86-107	2	20	
Sulfate as SO4	261	2.4	5.0	mg/l	200	51.4	105	78-111	0.06	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1288 - EPA 300.1											
Blank (W3J1288-BLK1)						Prepared & Analyzed: 10/16/23					
Bromate	ND	1.4	5.0	ug/l							
Bromide	ND	1.7	10	ug/l							
Chlorate	ND	1.7	10	ug/l							
Chlorite	ND	2.2	10	ug/l							
<i>Surrogate(s)</i>											
Dichloroacetate	523			ug/l	500		105	90-115			
LCS (W3J1288-BS1)						Prepared & Analyzed: 10/16/23					
Bromate	101	1.4	5.0	ug/l	100		101	85-115			
Bromide	99.0	1.7	10	ug/l	100		99	85-115			
Chlorate	104	1.7	10	ug/l	100		104	85-115			
Chlorite	103	2.2	10	ug/l	100		103	85-115			
<i>Surrogate(s)</i>											
Dichloroacetate	538			ug/l	500		108	90-115			
Matrix Spike (W3J1288-MS1)						Source: 3114012-02 Prepared: 10/16/23 Analyzed: 10/17/23					
Bromate	57.8	1.4	5.0	ug/l	100	ND	58	64-133			MS-01
Bromide	1270	1.7	10	ug/l	100	1240	31	73-125			MS-02
Chlorate	81.8	1.7	10	ug/l	100	ND	82	76-120			
Chlorite	88.7	2.2	10	ug/l	100	ND	89	78-129			
<i>Surrogate(s)</i>											
Dichloroacetate	460			ug/l	500		92	90-115			
Matrix Spike (W3J1288-MS2)						Source: 3114013-01 Prepared & Analyzed: 10/16/23					
Bromate	145	1.4	5.0	ug/l	100	ND	145	64-133			MS-01
Bromide	426	1.7	10	ug/l	100	368	58	73-125			MS-01
Chlorate	262	1.7	10	ug/l	100	191	71	76-120			MS-01
Chlorite	99.7	2.2	10	ug/l	100	ND	100	78-129			
<i>Surrogate(s)</i>											
Dichloroacetate	515			ug/l	500		103	90-115			
Matrix Spike Dup (W3J1288-MSD1)						Source: 3114012-02 Prepared: 10/16/23 Analyzed: 10/17/23					
Bromate	56.2	1.4	5.0	ug/l	100	ND	56	64-133	3	20	MS-01
Bromide	1270	1.7	10	ug/l	100	1240	28	73-125	0.2	20	MS-02
Chlorate	77.6	1.7	10	ug/l	100	ND	78	76-120	5	20	
Chlorite	89.2	2.2	10	ug/l	100	ND	89	78-129	0.5	20	
<i>Surrogate(s)</i>											
Dichloroacetate	468			ug/l	500		94	90-115			
Matrix Spike Dup (W3J1288-MSD2)						Source: 3114013-01 Prepared & Analyzed: 10/16/23					
Bromate	133	1.4	5.0	ug/l	100	ND	133	64-133	9	20	
Bromide	416	1.7	10	ug/l	100	368	48	73-125	2	20	MS-01
Chlorate	259	1.7	10	ug/l	100	191	68	76-120	1	20	MS-01
Chlorite	88.2	2.2	10	ug/l	100	ND	88	78-129	12	20	
<i>Surrogate(s)</i>											

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.1 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1288 - EPA 300.1 (Continued)											
Matrix Spike Dup (W3J1288-MSD2)			Source: 3114013-01			Prepared & Analyzed: 10/16/23					
<i>Surrogate(s)</i>	-----										
Dichloroacetate	465			ug/l	500		93	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0523 - EPA 140.1											
Blank (W3J0523-BLK1) Prepared & Analyzed: 10/05/23											
Threshold Odor Number	1.0		1.0	T.O.N.							J
Duplicate (W3J0523-DUP1) Source: 3J05090-01 Prepared & Analyzed: 10/05/23											
Threshold Odor Number	1.0		1.0	T.O.N.		1.0			0	20	J
Batch: W3J0529 - SM 2540C											
Blank (W3J0529-BLK1) Prepared: 10/05/23 Analyzed: 10/06/23											
Total Dissolved Solids	ND	4.0	10	mg/l							
LCS (W3J0529-BS1) Prepared: 10/05/23 Analyzed: 10/06/23											
Total Dissolved Solids	810	4.0	10	mg/l	824		98	97-103			
Duplicate (W3J0529-DUP1) Source: 3J04131-02 Prepared: 10/05/23 Analyzed: 10/06/23											
Total Dissolved Solids	3360	4.0	10	mg/l		3360			0.1	10	
Duplicate (W3J0529-DUP2) Source: 3J05040-01 Prepared: 10/05/23 Analyzed: 10/06/23											
Total Dissolved Solids	3900	4.0	10	mg/l		3840			2	10	
Batch: W3J0576 - EPA 353.2											
Blank (W3J0576-BLK1) Prepared & Analyzed: 10/06/23											
Nitrate as N	ND	0.040	0.20	mg/l							
Nitrite as N	ND	42	100	ug/l							
LCS (W3J0576-BS1) Prepared & Analyzed: 10/06/23											
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101	90-110			
Nitrite as N	1020	42	100	ug/l	1000		102	90-110			
Matrix Spike (W3J0576-MS1) Source: 3J05090-02 Prepared & Analyzed: 10/06/23											
Nitrate as N	4.93	0.040	0.20	mg/l	2.00	2.91	101	90-110			
Nitrite as N	1020	42	100	ug/l	1000	ND	102	90-110			
Matrix Spike (W3J0576-MS2) Source: 3J05096-01 Prepared & Analyzed: 10/06/23											
Nitrate as N	6.84	0.040	0.20	mg/l	2.00	4.82	101	90-110			
Nitrite as N	1020	42	100	ug/l	1000	ND	102	90-110			
Matrix Spike Dup (W3J0576-MSD1) Source: 3J05090-02 Prepared & Analyzed: 10/06/23											
Nitrate as N	4.94	0.040	0.20	mg/l	2.00	2.91	102	90-110	0.2	20	
Nitrite as N	1020	42	100	ug/l	1000	ND	102	90-110	0	20	
Matrix Spike Dup (W3J0576-MSD2) Source: 3J05096-01 Prepared & Analyzed: 10/06/23											
Nitrate as N	6.82	0.040	0.20	mg/l	2.00	4.82	100	90-110	0.3	20	
Nitrite as N	1020	42	100	ug/l	1000	ND	102	90-110	0	20	
Batch: W3J0619 - SM 4500H+-B											
LCS (W3J0619-BS1) Prepared & Analyzed: 10/06/23											
pH	6.93	0.10	0.10	pH Units	6.86		101	98.8-101			
Duplicate (W3J0619-DUP1) Source: 3J05115-01 Prepared & Analyzed: 10/06/23											
pH	7.20	0.10	0.10	pH Units		7.17			0.4	3.1	
Batch: W3J0621 - SM 2320B											

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0621 - SM 2320B (Continued)											
Blank (W3J0621-BLK1)											
Alkalinity as CaCO3	ND	7.2	20	mg/l							
						Prepared: 10/09/23 Analyzed: 10/10/23					
LCS (W3J0621-BS1)											
Alkalinity as CaCO3	192	7.2	20	mg/l	186		103	94-108			
						Prepared: 10/09/23 Analyzed: 10/10/23					
Duplicate (W3J0621-DUP1)											
Alkalinity as CaCO3	288	7.2	20	mg/l		311			8	15	
						Source: 3J04122-05 Prepared: 10/09/23 Analyzed: 10/10/23					
Batch: W3J0627 - SM 2120B											
LCS (W3J0627-BS1)											
Color	10.0		3.0	Color Units	10.0		100	95-105			
						Prepared & Analyzed: 10/06/23					
Duplicate (W3J0627-DUP1)											
Color	ND		3.0	Color Units		ND				10	
						Source: 3J05115-01 Prepared: 10/06/23					
Batch: W3J0755 - SM 2540C											
Blank (W3J0755-BLK1)											
Total Dissolved Solids	ND	4.0	10	mg/l							
						Prepared: 10/09/23 Analyzed: 10/10/23					
LCS (W3J0755-BS1)											
Total Dissolved Solids	825	4.0	10	mg/l	824		100	97-103			
						Prepared: 10/09/23 Analyzed: 10/10/23					
Duplicate (W3J0755-DUP1)											
Total Dissolved Solids	1890	4.0	10	mg/l		1880			0.4	10	
						Source: 3J06036-05 Prepared: 10/09/23 Analyzed: 10/10/23					
Duplicate (W3J0755-DUP2)											
Total Dissolved Solids	2110	4.0	10	mg/l		2060			3	10	
						Source: 3J06036-07 Prepared: 10/09/23 Analyzed: 10/10/23					
Batch: W3J1122 - EPA 350.1											
Blank (W3J1122-BLK1)											
Ammonia as N	ND	0.017	0.10	mg/l							
						Prepared: 10/12/23 Analyzed: 10/13/23					
Blank (W3J1122-BLK2)											
Ammonia as N	ND	0.017	0.10	mg/l							
						Prepared: 10/12/23 Analyzed: 10/13/23					
LCS (W3J1122-BS1)											
Ammonia as N	0.256	0.017	0.10	mg/l	0.250		102	90-110			
						Prepared: 10/12/23 Analyzed: 10/13/23					
LCS (W3J1122-BS2)											
Ammonia as N	0.245	0.017	0.10	mg/l	0.250		98	90-110			
						Prepared: 10/12/23 Analyzed: 10/13/23					
Matrix Spike (W3J1122-MS1)											
Ammonia as N	1.60	0.017	0.10	mg/l	0.250	1.36	97	90-110			
						Prepared: 10/12/23 Analyzed: 10/13/23					
Matrix Spike (W3J1122-MS2)											
Ammonia as N	0.272	0.017	0.10	mg/l	0.250	0.0290	97	90-110			
						Prepared: 10/12/23 Analyzed: 10/13/23					
Matrix Spike Dup (W3J1122-MSD1)											
Ammonia as N	1.60	0.017	0.10	mg/l	0.250	1.36	98	90-110	0.2	15	
						Prepared: 10/12/23 Analyzed: 10/13/23					
Matrix Spike Dup (W3J1122-MSD2)											
Ammonia as N	0.272	0.017	0.10	mg/l	0.250	0.0290	97	90-110	0.04	15	
						Prepared: 10/12/23 Analyzed: 10/13/23					
Batch: W3J1800 - EPA 365.3											

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1800 - EPA 365.3 (Continued)											
Blank (W3J1800-BLK1)											
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
					Prepared: 10/20/23 Analyzed: 10/24/23						
LCS (W3J1800-BS1)											
Phosphorus as PO4, Total	0.623	0.021	0.030	mg/l	0.612		102	90-110			
					Prepared: 10/20/23 Analyzed: 10/24/23						
Matrix Spike (W3J1800-MS1)											
Phosphorus as PO4, Total	0.976	0.021	0.030	mg/l	0.612	0.356	101	90-110			
					Source: 3J10100-01 Prepared: 10/20/23 Analyzed: 10/24/23						
Matrix Spike Dup (W3J1800-MSD1)											
Phosphorus as PO4, Total	0.957	0.021	0.030	mg/l	0.612	0.356	98	90-110	2	20	
					Source: 3J10100-01 Prepared: 10/20/23 Analyzed: 10/24/23						

Quality Control Results (Continued)

Hexavalent Chromium by IC

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1089 - EPA 218.6											
Blank (W3J1089-BLK1)											
Chromium 6+	ND	0.0079	0.020	ug/l							
					Prepared & Analyzed: 10/12/23						
LCS (W3J1089-BS1)											
Chromium 6+	5.32	0.0079	0.020	ug/l	5.00		106	90-110			
					Prepared & Analyzed: 10/12/23						
Matrix Spike (W3J1089-MS1)											
Chromium 6+	5.32	0.0079	0.020	ug/l	5.00	0.139	104	88-112			
					Source: 3J11052-04 Prepared & Analyzed: 10/12/23						
Matrix Spike Dup (W3J1089-MSD1)											
Chromium 6+	5.42	0.0079	0.020	ug/l	5.00	0.139	106	88-112	2	10	
					Source: 3J11052-04 Prepared & Analyzed: 10/12/23						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1112 - EPA 200.7											
Blank (W3J1112-BLK1)											
					Prepared: 10/12/23 Analyzed: 10/16/23						
Boron, Total	ND	3.0	10	ug/l							
Calcium, Total	ND	0.0240	0.500	mg/l							
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Magnesium, Total	ND	0.0390	0.500	mg/l							
Potassium, Total	ND	0.086	0.50	mg/l							
Silica as SiO2, Dissolved	ND	0.0086	0.10	mg/l							
Silica as SiO2, Total	ND	0.0086	0.10	mg/l							
Sodium, Total	ND	0.13	1.0	mg/l							
LCS (W3J1112-BS1)											
					Prepared: 10/12/23 Analyzed: 10/16/23						
Boron, Total	205	3.0	10	ug/l	200		102	85-115			
Calcium, Total	48.5	0.0240	0.500	mg/l	50.2		97	85-115			
Iron, Dissolved	218	5.0	30	ug/l	200		109	85-115			
Iron, Total	0.218	0.0065	0.030	mg/l	0.200		109	85-115			
Magnesium, Total	48.5	0.0390	0.500	mg/l	50.2		97	85-115			
Potassium, Total	55.1	0.086	0.50	mg/l	52.0		106	85-115			
Silica as SiO2, Dissolved	44.0	0.0086	0.10	mg/l	43.2		102	85-115			
Silica as SiO2, Total	44.0	0.0086	0.10	mg/l	43.2		102	85-115			
Sodium, Total	48.7	0.13	1.0	mg/l	50.2		97	85-115			
Matrix Spike (W3J1112-MS1)											
					Source: 3I29017-02 Prepared: 10/12/23 Analyzed: 10/16/23						
Boron, Total	281	3.0	10	ug/l	200	102	89	70-130			
Calcium, Total	119	0.0240	0.500	mg/l	50.2	73.0	93	70-130			
Iron, Dissolved	275	5.0	30	ug/l	200	14.7	130	70-130			
Iron, Total	0.275	0.0065	0.030	mg/l	0.200	0.0147	130	70-130			
Magnesium, Total	62.9	0.0390	0.500	mg/l	50.2	14.7	96	70-130			
Potassium, Total	61.2	0.086	0.50	mg/l	52.0	4.43	109	70-130			
Silica as SiO2, Dissolved	63.9	0.0086	0.10	mg/l	43.2	20.0	101	70-130			
Silica as SiO2, Total	63.9	0.0086	0.10	mg/l	43.2	20.0	101	70-130			
Sodium, Total	71.3	0.13	1.0	mg/l	50.2	21.4	99	70-130			
Matrix Spike (W3J1112-MS2)											
					Source: 3J06171-11 Prepared: 10/12/23 Analyzed: 10/16/23						
Boron, Total	303	3.0	10	ug/l	200	127	88	70-130			
Calcium, Total	189	0.0240	0.500	mg/l	50.2	146	86	70-130			
Iron, Dissolved	231	5.0	30	ug/l	200	ND	116	70-130			
Iron, Total	0.231	0.0065	0.030	mg/l	0.200	0.0194	106	70-130			
Magnesium, Total	117	0.0390	0.500	mg/l	50.2	70.7	92	70-130			
Potassium, Total	61.5	0.086	0.50	mg/l	52.0	3.13	112	70-130			
Silica as SiO2, Dissolved	79.0	0.0086	0.10	mg/l	43.2	35.7	100	70-130			
Silica as SiO2, Total	79.0	0.0086	0.10	mg/l	43.2	35.9	100	70-130			
Sodium, Total	138	0.13	1.0	mg/l	50.2	88.5	99	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1112 - EPA 200.7 (Continued)											
Matrix Spike (W3J1112-MS2)			Source: 3J06171-11			Prepared: 10/12/23 Analyzed: 10/16/23					
Matrix Spike Dup (W3J1112-MSD1)											
Source: 3I29017-02			Prepared: 10/12/23 Analyzed: 10/16/23								
Boron, Total	272	3.0	10	ug/l	200	102	85	70-130	3	30	
Calcium, Total	119	0.0240	0.500	mg/l	50.2	73.0	92	70-130	0.2	30	
Iron, Dissolved	228	5.0	30	ug/l	200	14.7	107	70-130	19	30	
Iron, Total	0.228	0.0065	0.030	mg/l	0.200	0.0147	107	70-130	19	30	
Magnesium, Total	62.8	0.0390	0.500	mg/l	50.2	14.7	96	70-130	0.2	30	
Potassium, Total	60.9	0.086	0.50	mg/l	52.0	4.43	109	70-130	0.4	30	
Silica as SiO2, Dissolved	64.1	0.0086	0.10	mg/l	43.2	20.0	102	70-130	0.3	30	
Silica as SiO2, Total	64.1	0.0086	0.10	mg/l	43.2	20.0	102	70-130	0.3	30	
Sodium, Total	71.1	0.13	1.0	mg/l	50.2	21.4	99	70-130	0.3	30	
Matrix Spike Dup (W3J1112-MSD2)											
Source: 3J06171-11			Prepared: 10/12/23 Analyzed: 10/16/23								
Boron, Total	295	3.0	10	ug/l	200	127	84	70-130	3	30	
Calcium, Total	191	0.0240	0.500	mg/l	50.2	146	91	70-130	1	30	
Iron, Dissolved	236	5.0	30	ug/l	200	ND	118	70-130	2	30	
Iron, Total	0.236	0.0065	0.030	mg/l	0.200	0.0194	108	70-130	2	30	
Magnesium, Total	118	0.0390	0.500	mg/l	50.2	70.7	95	70-130	1	30	
Potassium, Total	62.2	0.086	0.50	mg/l	52.0	3.13	114	70-130	1	30	
Silica as SiO2, Dissolved	80.2	0.0086	0.10	mg/l	43.2	35.7	103	70-130	1	30	
Silica as SiO2, Total	80.2	0.0086	0.10	mg/l	43.2	35.9	103	70-130	1	30	
Sodium, Total	140	0.13	1.0	mg/l	50.2	88.5	102	70-130	1	30	
Batch: W3J1114 - EPA 200.8											
Blank (W3J1114-BLK1)			Prepared: 10/12/23 Analyzed: 10/16/23								
Aluminum, Total	ND	4.4	20	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W3J1114-BS1)											
Prepared: 10/12/23 Analyzed: 10/16/23											
Aluminum, Total	53.8	4.4	20	ug/l	50.0		107	85-115			
Arsenic, Total	53.1	0.074	0.40	ug/l	50.0		106	85-115			
Barium, Total	50.2	0.14	1.0	ug/l	50.0		100	85-115			
Copper, Total	53.2	0.23	0.50	ug/l	50.0		106	85-115			
Lead, Total	50.8	0.083	0.20	ug/l	50.0		101	85-115			
Manganese, Dissolved	53.1	0.11	1.0	ug/l	50.0		106	85-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1114 - EPA 200.8 (Continued)											
LCS (W3J1114-BS1)					Prepared: 10/12/23 Analyzed: 10/16/23						
Manganese, Total	53.1	0.23	1.0	ug/l	50.0		106	85-115			
Selenium, Total	51.1	0.067	0.40	ug/l	50.0		102	85-115			
Strontium, Total	51.0	0.036	0.20	ug/l	50.0		102	85-115			
Matrix Spike (W3J1114-MS1)					Source: 3J05115-01 Prepared: 10/12/23 Analyzed: 10/16/23						
Aluminum, Total	80.5	4.4	20	ug/l	50.0	23.8	113	70-130			
Arsenic, Total	53.0	0.074	0.40	ug/l	50.0	0.709	104	70-130			
Barium, Total	110	0.14	1.0	ug/l	50.0	59.1	102	70-130			
Copper, Total	49.6	0.23	0.50	ug/l	50.0	0.237	99	70-130			
Lead, Total	51.2	0.083	0.20	ug/l	50.0	ND	102	70-130			
Manganese, Dissolved	62.1	0.11	1.0	ug/l	50.0	6.16	112	70-130			
Manganese, Total	62.1	0.23	1.0	ug/l	50.0	11.1	102	70-130			
Selenium, Total	53.6	0.067	0.40	ug/l	50.0	4.35	98	70-130			
Strontium, Total	834	0.036	0.20	ug/l	50.0	783	102	70-130			
Matrix Spike Dup (W3J1114-MSD1)					Source: 3J05115-01 Prepared: 10/12/23 Analyzed: 10/16/23						
Aluminum, Total	80.7	4.4	20	ug/l	50.0	23.8	114	70-130	0.3	30	
Arsenic, Total	53.0	0.074	0.40	ug/l	50.0	0.709	105	70-130	0.07	30	
Barium, Total	110	0.14	1.0	ug/l	50.0	59.1	102	70-130	0.2	30	
Copper, Total	50.5	0.23	0.50	ug/l	50.0	0.237	101	70-130	2	30	
Lead, Total	51.1	0.083	0.20	ug/l	50.0	ND	102	70-130	0.4	30	
Manganese, Dissolved	62.9	0.11	1.0	ug/l	50.0	6.16	113	70-130	1	30	
Manganese, Total	62.9	0.23	1.0	ug/l	50.0	11.1	104	70-130	1	30	
Selenium, Total	54.0	0.067	0.40	ug/l	50.0	4.35	99	70-130	0.8	30	
Strontium, Total	819	0.036	0.20	ug/l	50.0	783	71	70-130	2	30	

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0595 - SM 9221B											
Blank (W3J0595-BLK1)					Prepared: 10/05/23 Analyzed: 10/11/23						
Total Coliform	ND	1.8	1.8	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/08/2023 17:32

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
_>=740	>=740
A-01	Using default temperature 20 C for calculation
J	Estimated conc. detected <MRL and >MDL.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
O-15	The sample was received with the recommended holding time nearly expired. It was analyzed as soon as possible but the maximum holding time was slightly exceeded.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3505115**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED								SPECIAL HANDLING				
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		140.1 Odor, 2120B Color	200.7/200.8 Total&Dissolved Metals*	alkalinity, TDS	300.0 Cl, F, SO4	300.1**	350.1 Ammonia, 353.2 NO2, NO3	365.3 PO4	Aggressive Index, CCP, LSI, Hardness	9215E TPC-Simplate	9221 MTFI	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package		
PROJECT MANAGER Chris Kindle		INVOICE TO: Rose Ford, Rford@BrwnCald.com		SAMPLER										Charges will apply for weekends/holidays		
ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPL. TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	140.1	200.7/200.8	alkalinity, TDS	300.0	300.1	350.1	365.3	Aggressive Index, CCP, LSI, Hardness	9215E	9221	COMMENTS
	10/5	8:50	G	PT-SW9-S4	10	X	X	X	X	X	X	X	X	X	X	*Bacteriological Testing has a strict 8 hour holding time. Lab must receive the samples within 6 hours of collection to have sufficient time to prepare and incubate the samples before expiration.
	10/5	13:10	G	PT-SW10-S4	10	X	X	X	X	X	X	X	X	X	X	
*Total Metals: B, Ca, Fe, K, Mg, Na, Silica, Al, As, Ba, Cu, Mn, Pb, Se, Sr																
*Dissolved Metals: Fe, Silica, Mn																
**300.1: Bromate, Bromide, Chlorate, Chlorite																

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 2:20	RECEIVED BY <i>[Signature]</i>	SAMPLE CONDITION: Actual Temperature: 4.9 T-0291 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 4:10	RECEIVED BY <i>[Signature]</i>		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **3105115**

Date/Time Received: **10/05/23 @ 16:14**

WKO Logged by: **Lester Abad**

of Samples: **02**

Samples Checked by: **Jerico Bolotano**

Delivered by: **Client**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		<input checked="" type="checkbox"/>		4.9°C
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				Wet/Blue
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Lester Abad*

Date: **10/05/23**

Work Orders: 3J05117

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/20/2023

Received Date: 10/5/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:44

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
Storm Drain 1	Client	3J05117-01	Water	10/05/23 09:00	
Storm Drain 2	Client	3J05117-02	Water	10/05/23 11:00	
Storm Drain 3	Client	3J05117-03	Water	10/05/23 13:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SM 9221B in Water Total Coliform		✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:44

Project Manager: Brown & Caldwell

Sample Results

Sample: Storm Drain 1
3J05117-01 (Water) Sampled: 10/05/23 9:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J1102		Preparation: EPA 508.1/SPE		Prepared: 10/12/23 09:01			Analyst: ajc
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/11/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/11/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/11/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/11/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/11/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/11/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/11/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/11/23	Q-ME
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/11/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/11/23	
Aroclor 1016	ND	0.048	0.10	ug/l	1	11/11/23	
Aroclor 1221	ND	0.044	0.10	ug/l	1	11/11/23	
Aroclor 1232	ND	0.064	0.10	ug/l	1	11/11/23	
Aroclor 1242	ND	0.070	0.10	ug/l	1	11/11/23	
Aroclor 1248	ND	0.049	0.10	ug/l	1	11/11/23	
Aroclor 1254	ND	0.068	0.10	ug/l	1	11/11/23	
Aroclor 1260	ND	0.076	0.10	ug/l	1	11/11/23	
beta-BHC	ND	0.0045	0.010	ug/l	1	11/11/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/11/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/11/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/11/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/11/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/11/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/11/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/11/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/11/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/11/23	Q-ME
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/11/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/11/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/11/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/11/23	
Heptachlor	ND	0.0031	0.010	ug/l	1	11/11/23	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/11/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/11/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 1
3J05117-01 (Water) Sampled: 10/05/23 9:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08				
Batch ID: W3J1102	Preparation: EPA 508.1/SPE	Prepared: 10/12/23 09:01				
		Analyst: ajc				
Kepone	ND	0.038	0.20 ug/l	1	11/11/23	
Methoxychlor	ND	0.010	0.010 ug/l	1	11/11/23	A-01
Mirex	ND	0.0030	0.010 ug/l	1	11/11/23	
PCBs, Total	ND	0.048	0.50 ug/l	1	11/11/23	
Propachlor	ND	0.045	0.20 ug/l	1	11/11/23	
Toxaphene	ND	0.37	1.0 ug/l	1	11/11/23	
trans-Nonachlor	ND	0.0020	0.010 ug/l	1	11/11/23	
Trifluralin	ND	0.0043	0.010 ug/l	1	11/11/23	

Surrogate(s)

4,4-Dibromobiphenyl	127%	Conc: 0.125	70-130	11/11/23
---------------------	------	-------------	--------	----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15			
Batch ID: W3J0728	Preparation: _NONE (WETCHEM)	Prepared: 10/09/23 15:32			
		Analyst: mes			
Total Suspended Solids	ND	5	mg/l	1	10/09/23

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06			
Batch ID: W3J0968	Preparation: EPA 200.2	Prepared: 10/11/23 12:11			
		Analyst: tyc			
Cadmium, Total	ND	0.042	0.20 ug/l	1	10/12/23
Copper, Total	ND	0.23	0.50 ug/l	1	10/12/23
Lead, Total	ND	0.083	0.20 ug/l	1	10/12/23
Silver, Total	ND	0.055	0.20 ug/l	1	10/12/23
Zinc, Total	ND	1.7	10 ug/l	1	10/12/23

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12				
Batch ID: W3J0595	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/05/23 17:30				
		Analyst: mdc				
Total Coliform	ND	1.8	1.8 MPN/100mL	1	10/07/23	O-15

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08			
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06			
		Analyst: ADM			
Tert-butyl alcohol	ND	0.45	2.0 ug/l	1	10/07/23

Surrogate(s)

1,2-Dichlorobenzene-d4	91%	Conc: 45.7	70-130	10/07/23
4-Bromofluorobenzene	87%	Conc: 43.6	70-130	10/07/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 2
3J05117-02 (Water) Sampled: 10/05/23 11:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J1102		Preparation: EPA 508.1/SPE		Prepared: 10/12/23 09:01			Analyst: ajc
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/11/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/11/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/11/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/11/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/11/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/11/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/11/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/11/23	Q-ME
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/11/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/11/23	
Aroclor 1016	ND	0.048	0.10	ug/l	1	11/11/23	
Aroclor 1221	ND	0.044	0.10	ug/l	1	11/11/23	
Aroclor 1232	ND	0.064	0.10	ug/l	1	11/11/23	
Aroclor 1242	ND	0.070	0.10	ug/l	1	11/11/23	
Aroclor 1248	ND	0.049	0.10	ug/l	1	11/11/23	
Aroclor 1254	ND	0.068	0.10	ug/l	1	11/11/23	
Aroclor 1260	ND	0.076	0.10	ug/l	1	11/11/23	
beta-BHC	ND	0.0045	0.010	ug/l	1	11/11/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/11/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/11/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/11/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/11/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/11/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/11/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/11/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/11/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/11/23	Q-ME
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/11/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/11/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/11/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/11/23	
Heptachlor	ND	0.0031	0.010	ug/l	1	11/11/23	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/11/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/11/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 2
3J05117-02 (Water) Sampled: 10/05/23 11:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08					
Batch ID: W3J1102	Preparation: EPA 508.1/SPE	Prepared: 10/12/23 09:01		Analyst: ajc			
Kepone	ND	0.038	0.20	ug/l	1	11/11/23	
Methoxychlor	ND	0.010	0.010	ug/l	1	11/11/23	A-01
Mirex	ND	0.0030	0.010	ug/l	1	11/11/23	
PCBs, Total	ND	0.048	0.50	ug/l	1	11/11/23	
Propachlor	ND	0.045	0.20	ug/l	1	11/11/23	
Toxaphene	ND	0.37	1.0	ug/l	1	11/11/23	
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/11/23	
Trifluralin	ND	0.0043	0.010	ug/l	1	11/11/23	

Surrogate(s)

4,4-Dibromobiphenyl	122%	Conc: 0.118	70-130			11/11/23	
---------------------	------	-------------	--------	--	--	----------	--

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15					
Batch ID: W3J0728	Preparation: _NONE (WETCHEM)	Prepared: 10/09/23 15:32		Analyst: mes			
Total Suspended Solids	0.1		5	mg/l	1	10/09/23	J

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06					
Batch ID: W3J0968	Preparation: EPA 200.2	Prepared: 10/11/23 12:11		Analyst: tyc			
Cadmium, Total	ND	0.042	0.20	ug/l	1	10/12/23	
Copper, Total	ND	0.23	0.50	ug/l	1	10/12/23	
Lead, Total	ND	0.083	0.20	ug/l	1	10/12/23	
Silver, Total	ND	0.055	0.20	ug/l	1	10/12/23	
Zinc, Total	ND	1.7	10	ug/l	1	10/12/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12					
Batch ID: W3J0595	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/05/23 17:30		Analyst: mdc			
Total Coliform	ND	1.8	1.8	MPN/100mL	1	10/07/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08					
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06		Analyst: ADM			
Tert-butyl alcohol	ND	0.45	2.0	ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	101%	Conc: 50.5	70-130			10/07/23	
4-Bromofluorobenzene	93%	Conc: 46.5	70-130			10/07/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 3
3J05117-03 (Water) Sampled: 10/05/23 13:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			Instr: GC08				
Batch ID: W3J1102		Preparation: EPA 508.1/SPE		Prepared: 10/12/23 09:01			Analyst: ajc
2,4'-DDD	ND	0.0030	0.010	ug/l	1	11/11/23	
2,4'-DDE	ND	0.0030	0.010	ug/l	1	11/11/23	
2,4'-DDT	ND	0.0030	0.010	ug/l	1	11/11/23	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	11/11/23	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	11/11/23	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	11/11/23	
Alachlor	ND	0.026	0.20	ug/l	1	11/11/23	
Aldrin	ND	0.0040	0.010	ug/l	1	11/11/23	Q-ME
alpha-BHC	ND	0.0015	0.010	ug/l	1	11/11/23	
alpha-Chlordane	ND	0.0031	0.010	ug/l	1	11/11/23	
Aroclor 1016	ND	0.048	0.10	ug/l	1	11/11/23	
Aroclor 1221	ND	0.044	0.10	ug/l	1	11/11/23	
Aroclor 1232	ND	0.064	0.10	ug/l	1	11/11/23	
Aroclor 1242	ND	0.070	0.10	ug/l	1	11/11/23	
Aroclor 1248	ND	0.049	0.10	ug/l	1	11/11/23	
Aroclor 1254	ND	0.068	0.10	ug/l	1	11/11/23	
Aroclor 1260	ND	0.076	0.10	ug/l	1	11/11/23	
beta-BHC	ND	0.0045	0.010	ug/l	1	11/11/23	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	11/11/23	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	11/11/23	
cis-Nonachlor	ND	0.0030	0.010	ug/l	1	11/11/23	
delta-BHC	ND	0.0030	0.010	ug/l	1	11/11/23	
Dieldrin	ND	0.0030	0.010	ug/l	1	11/11/23	
Endosulfan I	ND	0.0030	0.010	ug/l	1	11/11/23	
Endosulfan II	ND	0.0019	0.010	ug/l	1	11/11/23	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	11/11/23	
Endrin	ND	0.0030	0.010	ug/l	1	11/11/23	Q-ME
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	11/11/23	
Endrin ketone	ND	0.0042	0.010	ug/l	1	11/11/23	
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	11/11/23	
gamma-Chlordane	ND	0.0074	0.010	ug/l	1	11/11/23	
Heptachlor	ND	0.0031	0.010	ug/l	1	11/11/23	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	11/11/23	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	11/11/23	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	11/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Storm Drain 3
3J05117-03 (Water) Sampled: 10/05/23 13:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08					
Batch ID: W3J1102	Preparation: EPA 508.1/SPE	Prepared: 10/12/23 09:01		Analyst: ajc			
Kepone	ND	0.038	0.20	ug/l	1	11/11/23	
Methoxychlor	ND	0.010	0.010	ug/l	1	11/11/23	A-01
Mirex	ND	0.0030	0.010	ug/l	1	11/11/23	
PCBs, Total	ND	0.048	0.50	ug/l	1	11/11/23	
Propachlor	ND	0.045	0.20	ug/l	1	11/11/23	
Toxaphene	ND	0.37	1.0	ug/l	1	11/11/23	
trans-Nonachlor	ND	0.0020	0.010	ug/l	1	11/11/23	
Trifluralin	ND	0.0043	0.010	ug/l	1	11/11/23	

Surrogate(s)

4,4-Dibromobiphenyl	134%	Conc: 0.131	70-130			11/11/23	A-01a
---------------------	------	-------------	--------	--	--	----------	-------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 2540D		Instr: OVEN15					
Batch ID: W3J1019	Preparation: _NONE (WETCHEM)	Prepared: 10/11/23 13:09		Analyst: kac			
Total Suspended Solids	0.2		5	mg/l	1	10/11/23	J

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS06					
Batch ID: W3J0968	Preparation: EPA 200.2	Prepared: 10/11/23 12:11		Analyst: tyc			
Cadmium, Total	ND	0.042	0.20	ug/l	1	10/12/23	
Copper, Total	ND	0.23	0.50	ug/l	1	10/12/23	
Lead, Total	ND	0.083	0.20	ug/l	1	10/12/23	
Silver, Total	ND	0.055	0.20	ug/l	1	10/12/23	
Zinc, Total	ND	1.7	10	ug/l	1	10/12/23	

Microbiological Parameters by Standard Methods

Method: SM 9221B		Instr: INC12					
Batch ID: W3J0595	Preparation: _NONE (MICROBIOLOGY)	Prepared: 10/05/23 17:30		Analyst: mdc			
Total Coliform	ND	1.8	1.8	MPN/100mL	1	10/07/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08					
Batch ID: W3J0533	Preparation: EPA 5030B	Prepared: 10/06/23 07:06		Analyst: ADM			
Tert-butyl alcohol	ND	0.45	2.0	ug/l	1	10/07/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	98%	Conc: 49.2	70-130			10/07/23	
4-Bromofluorobenzene	93%	Conc: 46.3	70-130			10/07/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:44

Project Manager: Brown & Caldwell

Quality Control Results

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source	%REC		RPD		Qualifier
						Result	%REC	Limits	RPD	Limit	
Batch: W3J1102 - EPA 508.1											
Blank (W3J1102-BLK1)						Prepared: 10/12/23 Analyzed: 11/10/23					
2,4'-DDD	ND	0.0030	0.010	ug/l							
2,4'-DDE	ND	0.0030	0.010	ug/l							
2,4'-DDT	ND	0.0030	0.010	ug/l							
4,4'-DDD	ND	0.0030	0.010	ug/l							
4,4'-DDE	ND	0.0040	0.010	ug/l							
4,4'-DDT	ND	0.0030	0.010	ug/l							
Alachlor	ND	0.026	0.20	ug/l							
Aldrin	ND	0.0040	0.010	ug/l							
alpha-BHC	ND	0.0015	0.010	ug/l							
alpha-Chlordane	ND	0.0031	0.010	ug/l							
Aroclor 1016	ND	0.048	0.10	ug/l							
Aroclor 1221	ND	0.044	0.10	ug/l							
Aroclor 1232	ND	0.064	0.10	ug/l							
Aroclor 1242	ND	0.070	0.10	ug/l							
Aroclor 1248	ND	0.049	0.10	ug/l							
Aroclor 1254	ND	0.068	0.10	ug/l							
Aroclor 1260	ND	0.076	0.10	ug/l							
beta-BHC	ND	0.0045	0.010	ug/l							
Chlordane (tech)	ND	0.067	0.10	ug/l							
Chlorothalonil	ND	0.0040	0.050	ug/l							
cis-Nonachlor	ND	0.0030	0.010	ug/l							
delta-BHC	ND	0.0030	0.010	ug/l							
Dieldrin	ND	0.0030	0.010	ug/l							
Endosulfan I	ND	0.0030	0.010	ug/l							
Endosulfan II	ND	0.0019	0.010	ug/l							
Endosulfan sulfate	ND	0.0030	0.010	ug/l							
Endrin	ND	0.0030	0.010	ug/l							
Endrin aldehyde	ND	0.0040	0.010	ug/l							
Endrin ketone	ND	0.0042	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l							
gamma-Chlordane	ND	0.0074	0.010	ug/l							
Heptachlor	ND	0.0031	0.010	ug/l							
Heptachlor epoxide	ND	0.0019	0.010	ug/l							
Hexachlorobenzene	ND	0.0019	0.050	ug/l							
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l							
Kepone	ND	0.038	0.20	ug/l							
Methoxychlor	ND	0.0030	0.010	ug/l							
Mirex	ND	0.0030	0.010	ug/l							
PCBs, Total	ND	0.048	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1102 - EPA 508.1 (Continued)											
Blank (W3J1102-BLK1)											
					Prepared: 10/12/23 Analyzed: 11/10/23						
Propachlor	ND	0.045	0.20	ug/l							
Toxaphene	ND	0.37	1.0	ug/l							
trans-Nonachlor	ND	0.0020	0.010	ug/l							
Trifluralin	ND	0.0043	0.010	ug/l							
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.120			ug/l	0.100		120	70-130			
LCS (W3J1102-BS1)											
					Prepared: 10/12/23 Analyzed: 11/10/23						
4,4'-DDD	0.107	0.0030	0.010	ug/l	0.100		107	70-130			
4,4'-DDE	0.0847	0.0040	0.010	ug/l	0.100		85	70-130			
4,4'-DDT	0.0977	0.0030	0.010	ug/l	0.100		98	70-130			
Aldrin	0.0684	0.0040	0.010	ug/l	0.100		68	50-130			
alpha-BHC	0.103	0.0015	0.010	ug/l	0.100		103	70-130			
alpha-Chlordane	0.0989	0.0031	0.010	ug/l	0.100		99	70-130			
beta-BHC	0.0944	0.0045	0.010	ug/l	0.100		94	70-130			
delta-BHC	0.108	0.0030	0.010	ug/l	0.100		108	70-130			
Dieldrin	0.0941	0.0030	0.010	ug/l	0.100		94	70-130			
Endosulfan I	0.0863	0.0030	0.010	ug/l	0.100		86	70-130			
Endosulfan II	0.0920	0.0019	0.010	ug/l	0.100		92	70-130			
Endosulfan sulfate	0.0898	0.0030	0.010	ug/l	0.100		90	70-130			
Endrin	0.0612	0.0030	0.010	ug/l	0.100		61	70-130			Q-ME
Endrin aldehyde	0.0983	0.0040	0.010	ug/l	0.100		98	70-130			
Endrin ketone	0.130	0.0042	0.010	ug/l	0.100		130	70-130			
gamma-BHC (Lindane)	0.103	0.0030	0.010	ug/l	0.100		103	70-130			
gamma-Chlordane	0.0976	0.0074	0.010	ug/l	0.100		98	70-130			
Heptachlor	0.0913	0.0031	0.010	ug/l	0.100		91	70-130			
Heptachlor epoxide	0.100	0.0019	0.010	ug/l	0.100		100	70-130			
Methoxychlor	0.111	0.0030	0.010	ug/l	0.100		111	70-130			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.125			ug/l	0.100		125	70-130			
LCS (W3J1102-BS2)											
					Prepared: 10/12/23 Analyzed: 11/10/23						
Toxaphene	0.986	0.37	1.0	ug/l	1.00		99	70-130			J
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.145			ug/l	0.100		145	70-130			S-BS
LCS (W3J1102-BS3)											
					Prepared: 10/12/23 Analyzed: 11/10/23						
4,4'-DDD	0.00776	0.0030	0.010	ug/l	0.0100		78	50-150			J
4,4'-DDE	0.00587	0.0040	0.010	ug/l	0.0100		59	50-150			J
4,4'-DDT	0.00731	0.0030	0.010	ug/l	0.0100		73	50-150			J
Aldrin	0.00448	0.0040	0.010	ug/l	0.0100		45	50-150			Q-ME, J
alpha-BHC	0.00679	0.0015	0.010	ug/l	0.0100		68	50-150			J
alpha-Chlordane	0.00754	0.0031	0.010	ug/l	0.0100		75	50-150			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1102 - EPA 508.1 (Continued)											
LCS (W3J1102-BS3)					Prepared: 10/12/23 Analyzed: 11/10/23						
beta-BHC	0.00852	0.0045	0.010	ug/l	0.0100		85	50-150			J
delta-BHC	0.00786	0.0030	0.010	ug/l	0.0100		79	50-150			J
Dieldrin	0.00685	0.0030	0.010	ug/l	0.0100		69	50-150			J
Endosulfan I	0.00701	0.0030	0.010	ug/l	0.0100		70	50-150			J
Endosulfan II	0.00730	0.0019	0.010	ug/l	0.0100		73	50-150			J
Endosulfan sulfate	0.0101	0.0030	0.010	ug/l	0.0100		101	50-150			
Endrin	0.00497	0.0030	0.010	ug/l	0.0100		50	50-150			J
Endrin aldehyde	0.00798	0.0040	0.010	ug/l	0.0100		80	50-150			J
Endrin ketone	0.0103	0.0042	0.010	ug/l	0.0100		103	50-150			
gamma-BHC (Lindane)	0.00750	0.0030	0.010	ug/l	0.0100		75	50-150			J
gamma-Chlordane	0.00745	0.0074	0.010	ug/l	0.0100		74	50-150			J
Heptachlor	0.00749	0.0031	0.010	ug/l	0.0100		75	50-150			J
Heptachlor epoxide	0.00757	0.0019	0.010	ug/l	0.0100		76	50-150			J
Methoxychlor	0.0108	0.0030	0.010	ug/l	0.0100		108	50-150			
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.118			ug/l	0.100		118	70-130			

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0728 - SM 2540D											
Blank (W3J0728-BLK1)					Prepared & Analyzed: 10/09/23						
Total Suspended Solids	ND		5	mg/l							
LCS (W3J0728-BS1)					Prepared & Analyzed: 10/09/23						
Total Suspended Solids	60.2		5	mg/l	56.8		106	90-110			
Duplicate (W3J0728-DUP1)					Prepared & Analyzed: 10/09/23						
Total Suspended Solids	78.7		5	mg/l	82.0				4	10	
Duplicate (W3J0728-DUP2)					Prepared & Analyzed: 10/09/23						
Total Suspended Solids	428		5	mg/l	418				2	10	
Batch: W3J1019 - SM 2540D											
Blank (W3J1019-BLK1)					Prepared & Analyzed: 10/11/23						
Total Suspended Solids	0.200		5	mg/l							J
LCS (W3J1019-BS1)					Prepared & Analyzed: 10/11/23						
Total Suspended Solids	53.3		5	mg/l	52.0		102	90-110			
Duplicate (W3J1019-DUP1)					Prepared & Analyzed: 10/11/23						
Total Suspended Solids	1310		5	mg/l	1270				3	10	
Duplicate (W3J1019-DUP2)					Prepared & Analyzed: 10/11/23						
Total Suspended Solids	6.40		5	mg/l	6.80				6	10	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0968 - EPA 200.8											
Blank (W3J0968-BLK1)					Prepared: 10/11/23 Analyzed: 10/12/23						
Cadmium, Total	ND	0.042	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Silver, Total	ND	0.055	0.20	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W3J0968-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23						
Cadmium, Total	50.1	0.042	0.20	ug/l	50.0		100	85-115			
Copper, Total	53.8	0.23	0.50	ug/l	50.0		107	85-115			
Lead, Total	50.9	0.083	0.20	ug/l	50.0		102	85-115			
Silver, Total	50.0	0.055	0.20	ug/l	50.0		100	85-115			
Zinc, Total	52.5	1.7	10	ug/l	50.0		105	85-115			
Matrix Spike (W3J0968-MS1)					Source: 3J05117-01 Prepared: 10/11/23 Analyzed: 10/12/23						
Cadmium, Total	50.4	0.042	0.20	ug/l	50.0	ND	101	70-130			
Copper, Total	50.5	0.23	0.50	ug/l	50.0	ND	101	70-130			
Lead, Total	51.5	0.083	0.20	ug/l	50.0	ND	103	70-130			
Silver, Total	49.2	0.055	0.20	ug/l	50.0	ND	98	70-130			
Zinc, Total	50.6	1.7	10	ug/l	50.0	ND	101	70-130			
Matrix Spike Dup (W3J0968-MSD1)					Source: 3J05117-01 Prepared: 10/11/23 Analyzed: 10/12/23						
Cadmium, Total	49.7	0.042	0.20	ug/l	50.0	ND	99	70-130	1	30	
Copper, Total	50.3	0.23	0.50	ug/l	50.0	ND	101	70-130	0.2	30	
Lead, Total	50.6	0.083	0.20	ug/l	50.0	ND	101	70-130	2	30	
Silver, Total	48.9	0.055	0.20	ug/l	50.0	ND	98	70-130	0.5	30	
Zinc, Total	50.1	1.7	10	ug/l	50.0	ND	100	70-130	1	30	

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0595 - SM 9221B											
Blank (W3J0595-BLK1)					Prepared: 10/05/23 Analyzed: 10/11/23						
Total Coliform	ND	1.8	1.8	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0533 - EPA 524.2											
Blank (W3J0533-BLK1)											
Prepared: 10/06/23 Analyzed: 10/07/23											
Tert-butyl alcohol	ND	0.45	2.0	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.2			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	43.5			ug/l	50.0		87	70-130			
LCS (W3J0533-BS1)											
Prepared: 10/06/23 Analyzed: 10/07/23											
Tert-butyl alcohol	20.7	0.45	2.0	ug/l	20.0		103	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.9			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	50.7			ug/l	50.0		101	70-130			
LCS Dup (W3J0533-BSD1)											
Prepared: 10/06/23 Analyzed: 10/07/23											
Tert-butyl alcohol	20.0	0.45	2.0	ug/l	20.0		100	70-130	3	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	48.9			ug/l	50.0		98	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:44

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
A-01	MDL raised due to low sensitivity
A-01a	Surrogate recovery is outside of control limit. The data was accepted since all target analytes were non detected.
J	Estimated conc. detected <MRL and >MDL.
O-15	The sample was received with the recommended holding time nearly expired. It was analyzed as soon as possible but the maximum holding time was slightly exceeded.
Q-ME	Acceptable QC with marginal exceedance
S-BS	Surrogate recovery outside of control limits for LCS. The data was accepted based on valid recovery of the target analytes.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order #

3505117

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING																									
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		<table border="1"> <tr> <td>200.7 Fe - Total and Dissolved</td> <td>200.8 Mn - Total and Dissolved</td> <td>200.9 (Ag, Cd, Cu, Pb, Zn)</td> <td>254.0 Dsm - w solids, TSS</td> <td>508. - w Ext</td> <td>524.2 - w TBA</td> <td>9221B SM # MTEI Calif</td> <td></td> <td></td> <td></td> </tr> </table>				200.7 Fe - Total and Dissolved	200.8 Mn - Total and Dissolved	200.9 (Ag, Cd, Cu, Pb, Zn)	254.0 Dsm - w solids, TSS	508. - w Ext	524.2 - w TBA	9221B SM # MTEI Calif				<table border="1"> <tr> <td><input type="checkbox"/></td><td>Same Day Rush 150%</td> </tr> <tr> <td><input type="checkbox"/></td><td>24 Hour Rush 100%</td> </tr> <tr> <td><input type="checkbox"/></td><td>48-72 Hour Rush 75%</td> </tr> <tr> <td><input type="checkbox"/></td><td>4 - 5 Day Rush 30%</td> </tr> <tr> <td><input type="checkbox"/></td><td>Rush Extractions 50%</td> </tr> <tr> <td><input type="checkbox"/></td><td>10 - 15 Business Days</td> </tr> <tr> <td><input type="checkbox"/></td><td>QA/QC Data Package</td> </tr> </table>		<input type="checkbox"/>	Same Day Rush 150%	<input type="checkbox"/>	24 Hour Rush 100%	<input type="checkbox"/>	48-72 Hour Rush 75%	<input type="checkbox"/>	4 - 5 Day Rush 30%	<input type="checkbox"/>	Rush Extractions 50%	<input type="checkbox"/>	10 - 15 Business Days	<input type="checkbox"/>	QA/QC Data Package
200.7 Fe - Total and Dissolved	200.8 Mn - Total and Dissolved	200.9 (Ag, Cd, Cu, Pb, Zn)	254.0 Dsm - w solids, TSS	508. - w Ext	524.2 - w TBA	9221B SM # MTEI Calif																											
<input type="checkbox"/>	Same Day Rush 150%																																
<input type="checkbox"/>	24 Hour Rush 100%																																
<input type="checkbox"/>	48-72 Hour Rush 75%																																
<input type="checkbox"/>	4 - 5 Day Rush 30%																																
<input type="checkbox"/>	Rush Extractions 50%																																
<input type="checkbox"/>	10 - 15 Business Days																																
<input type="checkbox"/>	QA/QC Data Package																																
PROJECT MANAGER Chris Kindle		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com						Charges will apply for weekends/holidays																									

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPL. TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200.7 Fe - Total and Dissolved	200.8 Mn - Total and Dissolved	200.9 (Ag, Cd, Cu, Pb, Zn)	254.0 Dsm - w solids, TSS	508. - w Ext	524.2 - w TBA	9221B SM # MTEI Calif	COMMENTS
	10/5	9:00	G	Storm Drain 1	9			X	X	X	X	X	
	10/5	11:00	G	Storm Drain 2	9			X	X	X	X	X	
	10/5	13:00	G	Storm Drain 3	9			X	X	X	X	X	

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 2:25	RECEIVED BY <i>[Signature]</i>	SAMPLE CONDITION: Actual Temperature: 4.0 Received On Ice: T-0201 Preserved: <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Evidence Seals Present: <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Container Attacked: <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Preserved at Lab: <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N	SAMPLE TYPE CODE: AO=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 4:10	RECEIVED BY <i>[Signature]</i>		
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.



Sample Receipt Checklist

Weck WKO: **3105117**

Date/Time Received: **10/05/23 @ 16:14**

WKO Logged by: **Lester Abad**

of Samples: **03**

Samples Checked by: **Jerico Bolotano**

Delivered by: **Client**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				4.9°C
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				Wet/Blue
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none. If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot#11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Lester Abad*

Date: **10/05/23**

Work Orders: 3J06120

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 11/20/2023

Received Date: 10/6/2023

Turnaround Time: 5 workdays

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/06/23 with the Chain-of-Custody document. The samples were received in good condition, at 18.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GAC2-S11	Client	3J06120-01	Water	10/02/23 04:40	
PT-GACC1-S23	Client	3J06120-02	Water	10/02/23 03:12	
PT-GACC2-S11	Client	3J06120-03	Water	10/02/23 01:50	
PT-GAC3-S23	Client	3J06120-04	Water	10/02/23 04:57	
PT-GAC1-S11	Client	3J06120-05	Water	10/02/23 04:35	
PT-GACC1-S11	Client	3J06120-06	Water	10/02/23 03:37	
PT-GAC2-S23	Client	3J06120-07	Water	10/02/23 04:15	
PT-GAC1-S23	Client	3J06120-08	Water	10/02/23 04:10	
PT-GACC2-S23	Client	3J06120-09	Water	10/02/23 01:25	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFOA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GAC2-S11
3J06120-01 (Water) Sampled: 10/02/23 4:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0645 **Prepared:** 10/09/23 08:16
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 9.43	70-130			10/09/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0652 **Prepared:** 10/09/23 08:33
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/09/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0818 **Prepared:** 10/11/23 08:11
Preparation: EPA 537/SPE **Analyst:** rjr

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/12/23	
ADONA	ND	0.49	1.8	ng/l	1	10/12/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/12/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/12/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/12/23	
PFBS	ND	0.51	1.8	ng/l	1	10/12/23	
PFDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFDaA	ND	0.58	1.8	ng/l	1	10/12/23	
PFHpA	ND	0.47	1.8	ng/l	1	10/12/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/12/23	
PFHxS	ND	0.52	1.8	ng/l	1	10/12/23	
PFNA	ND	0.46	1.8	ng/l	1	10/12/23	
PFOA	ND	0.59	1.8	ng/l	1	10/12/23	
PFOS	ND	0.47	1.8	ng/l	1	10/12/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFTrDA	ND	0.37	1.8	ng/l	1	10/12/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/12/23	
<i>Surrogate(s)</i>							
13C2-PFDA	131%	Conc: 46.3	70-130			10/12/23	S-11
13C2-PFHxA	115%	Conc: 40.7	70-130			10/12/23	
d5-EtFOSAA	131%	Conc: 185	70-130			10/12/23	S-11
HFPO-DA-13C3	109%	Conc: 38.5	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0660 **Prepared:** 10/09/23 08:41
Preparation: EPA 5030B **Analyst:** ADM

3J06120

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC2-S11
3J06120-01 (Water) Sampled: 10/02/23 4:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC2-S11
3J06120-01 (Water) Sampled: 10/02/23 4:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC2-S11
 3J06120-01 (Water) Sampled: 10/02/23 4:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	95%	Conc: 47.3	70-130			10/09/23	
4-Bromofluorobenzene	92%	Conc: 46.0	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC1-S23
3J06120-02 (Water) Sampled: 10/02/23 3:12 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0645 **Prepared:** 10/09/23 08:16
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/09/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	95%	Conc: 9.20	70-130			10/09/23	
----------------	-----	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0652 **Prepared:** 10/09/23 08:33
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/09/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0818 **Prepared:** 10/11/23 08:11
Preparation: EPA 537/SPE **Analyst:** rjr

11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/12/23	
ADONA	ND	0.49	1.8	ng/l	1	10/12/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/12/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/12/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/12/23	
PFBS	ND	0.51	1.8	ng/l	1	10/12/23	
PFDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFDaA	ND	0.58	1.8	ng/l	1	10/12/23	
PFHpA	ND	0.47	1.8	ng/l	1	10/12/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/12/23	
PFHxS	ND	0.52	1.8	ng/l	1	10/12/23	
PFNA	ND	0.46	1.8	ng/l	1	10/12/23	
PFOA	ND	0.59	1.8	ng/l	1	10/12/23	
PFOS	ND	0.47	1.8	ng/l	1	10/12/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFTrDA	ND	0.37	1.8	ng/l	1	10/12/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/12/23	

Surrogate(s)

13C2-PFDA	122%	Conc: 43.1	70-130			10/12/23	
13C2-PFHxA	118%	Conc: 41.5	70-130			10/12/23	
d5-EtFOSAA	129%	Conc: 182	70-130			10/12/23	
HFPO-DA-13C3	115%	Conc: 40.4	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0660 **Prepared:** 10/09/23 08:41
Preparation: EPA 5030B **Analyst:** ADM

3J06120

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC1-S23
3J06120-02 (Water) Sampled: 10/02/23 3:12 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC1-S23
3J06120-02 (Water) Sampled: 10/02/23 3:12 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	0.55	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC1-S23
 3J06120-02 (Water) Sampled: 10/02/23 3:12 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	91%	Conc: 45.6	70-130			10/09/23	
4-Bromofluorobenzene	89%	Conc: 44.7	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC2-S11
3J06120-03 (Water) Sampled: 10/02/23 1:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0645 **Prepared:** 10/09/23 08:16
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/09/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	100%	Conc: 10.1	70-130			10/09/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0652 **Prepared:** 10/09/23 08:33
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/09/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0818 **Prepared:** 10/11/23 08:11
Preparation: EPA 537/SPE **Analyst:** rjr

11CI-PF3OUdS	ND	0.51	1.8	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.48	1.8	ng/l	1	10/12/23	
ADONA	ND	0.50	1.8	ng/l	1	10/12/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/12/23	
HFPO-DA	ND	0.79	1.8	ng/l	1	10/12/23	
MeFOSAA	ND	0.52	1.8	ng/l	1	10/12/23	
PFBS	ND	0.52	1.8	ng/l	1	10/12/23	
PFDA	ND	0.41	1.8	ng/l	1	10/12/23	
PFDaA	ND	0.59	1.8	ng/l	1	10/12/23	
PFHpA	ND	0.48	1.8	ng/l	1	10/12/23	
PFHxA	ND	0.44	1.8	ng/l	1	10/12/23	
PFHxS	ND	0.54	1.8	ng/l	1	10/12/23	
PFNA	ND	0.47	1.8	ng/l	1	10/12/23	
PFOA	ND	0.60	1.8	ng/l	1	10/12/23	
PFOS	ND	0.48	1.8	ng/l	1	10/12/23	
PFTeDA	ND	0.41	1.8	ng/l	1	10/12/23	
PFTTrDA	ND	0.38	1.8	ng/l	1	10/12/23	
PFUnA	ND	0.43	1.8	ng/l	1	10/12/23	

Surrogate(s)

13C2-PFDA	118%	Conc: 42.6	70-130			10/12/23	
13C2-PFHxA	116%	Conc: 41.9	70-130			10/12/23	
d5-EtFOSAA	125%	Conc: 181	70-130			10/12/23	
HFPO-DA-13C3	111%	Conc: 40.3	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0660 **Prepared:** 10/09/23 08:41
Preparation: EPA 5030B **Analyst:** ADM

3J06120

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC2-S11
3J06120-03 (Water) Sampled: 10/02/23 1:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	4.1	3.1	5.0	ug/l	1	10/09/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC2-S11
3J06120-03 (Water) Sampled: 10/02/23 1:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GACC2-S11
 3J06120-03 (Water) Sampled: 10/02/23 1:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	90%	Conc: 45.2	70-130			10/09/23	
4-Bromofluorobenzene	89%	Conc: 44.4	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC3-S23
3J06120-04 (Water) Sampled: 10/02/23 4:57 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0645 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:16 **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/09/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	106%	Conc: 10.9	70-130			10/09/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12

Batch ID: W3J0652 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:33 **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/09/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06

Batch ID: W3J0818 **Preparation:** EPA 537/SPE **Prepared:** 10/11/23 08:11 **Analyst:** rjr

11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/12/23	
ADONA	ND	0.48	1.7	ng/l	1	10/12/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/12/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/12/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/12/23	
PFBS	ND	0.50	1.7	ng/l	1	10/12/23	
PFDA	ND	0.39	1.7	ng/l	1	10/12/23	
PFDaA	ND	0.56	1.7	ng/l	1	10/12/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/12/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/12/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/12/23	
PFNA	ND	0.45	1.7	ng/l	1	10/12/23	
PFOA	ND	0.57	1.7	ng/l	1	10/12/23	
PFOS	ND	0.46	1.7	ng/l	1	10/12/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/12/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/12/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/12/23	

Surrogate(s)

13C2-PFDA	116%	Conc: 40.1	70-130			10/12/23	
13C2-PFHxA	119%	Conc: 40.9	70-130			10/12/23	
d5-EtFOSAA	129%	Conc: 177	70-130			10/12/23	
HFPO-DA-13C3	115%	Conc: 39.6	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0660 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:41 **Analyst:** ADM

3J06120

Page 15 of 49

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC3-S23
3J06120-04 (Water) Sampled: 10/02/23 4:57 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC3-S23
3J06120-04 (Water) Sampled: 10/02/23 4:57 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	0.34	0.23	0.50	ug/l	1	10/09/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:42

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC3-S23
 3J06120-04 (Water) Sampled: 10/02/23 4:57 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	91%	Conc: 45.6	70-130			10/09/23	
4-Bromofluorobenzene	85%	Conc: 42.6	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC1-S11
3J06120-05 (Water) Sampled: 10/02/23 4:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0645 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:16 **Analyst:** mld
 1,4-Dioxane ND 0.028 0.070 ug/l 1 10/09/23
Surrogate(s)
 1,4-Dioxane-d8 108% Conc: 10.8 70-130 10/09/23

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0652 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:33 **Analyst:** ADM
 1,2,3-Trichloropropane ND 0.0012 0.0050 ug/l 1 10/09/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0818 **Preparation:** EPA 537/SPE **Prepared:** 10/11/23 08:11 **Analyst:** rjr

11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/12/23	
ADONA	ND	0.48	1.7	ng/l	1	10/12/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/12/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/12/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/12/23	
PFBS	ND	0.50	1.7	ng/l	1	10/12/23	
PFDA	ND	0.39	1.7	ng/l	1	10/12/23	
PFDaA	ND	0.56	1.7	ng/l	1	10/12/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/12/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/12/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/12/23	
PFNA	ND	0.45	1.7	ng/l	1	10/12/23	
PFOA	ND	0.57	1.7	ng/l	1	10/12/23	
PFOS	ND	0.46	1.7	ng/l	1	10/12/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/12/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/12/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/12/23	
<i>Surrogate(s)</i>							
13C2-PFDA	121%	Conc: 41.8	70-130			10/12/23	
13C2-PFHxA	120%	Conc: 41.5	70-130			10/12/23	
d5-EtFOSAA	133%	Conc: 184	70-130			10/12/23	S-11
HFPO-DA-13C3	115%	Conc: 39.8	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0660 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:41 **Analyst:** ADM
 3J06120

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC1-S11
3J06120-05 (Water) Sampled: 10/02/23 4:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC1-S11
 3J06120-05 (Water) Sampled: 10/02/23 4:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:42

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC1-S11
 3J06120-05 (Water) Sampled: 10/02/23 4:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	97%	Conc: 48.3	70-130			10/09/23	
4-Bromofluorobenzene	92%	Conc: 45.9	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC1-S11
3J06120-06 (Water) Sampled: 10/02/23 3:37 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0645 **Prepared:** 10/09/23 08:16
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	107%	Conc: 10.4	70-130			10/09/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0652 **Prepared:** 10/09/23 08:33
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/09/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0818 **Prepared:** 10/11/23 08:11
Preparation: EPA 537/SPE **Analyst:** rjr

11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/12/23	
ADONA	ND	0.47	1.7	ng/l	1	10/12/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/12/23	
HFPO-DA	ND	0.74	1.7	ng/l	1	10/12/23	
MeFOSAA	ND	0.49	1.7	ng/l	1	10/12/23	
PFBS	ND	0.49	1.7	ng/l	1	10/12/23	
PFDA	ND	0.38	1.7	ng/l	1	10/12/23	
PFDaA	ND	0.56	1.7	ng/l	1	10/12/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/12/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/12/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/12/23	
PFNA	ND	0.44	1.7	ng/l	1	10/12/23	
PFOA	ND	0.57	1.7	ng/l	1	10/12/23	
PFOS	ND	0.45	1.7	ng/l	1	10/12/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/12/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/12/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/12/23	
<i>Surrogate(s)</i>							
13C2-PFDA	121%	Conc: 41.3	70-130			10/12/23	
13C2-PFHxA	119%	Conc: 40.6	70-130			10/12/23	
d5-EtFOSAA	128%	Conc: 175	70-130			10/12/23	
HFPO-DA-13C3	119%	Conc: 40.5	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0660 **Prepared:** 10/09/23 08:41
Preparation: EPA 5030B **Analyst:** ADM

3J06120

Page 23 of 49

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC1-S11
3J06120-06 (Water) Sampled: 10/02/23 3:37 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC1-S11
3J06120-06 (Water) Sampled: 10/02/23 3:37 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	0.58	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC1-S11
 3J06120-06 (Water) Sampled: 10/02/23 3:37 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	96%	Conc: 48.0	70-130			10/09/23	
4-Bromofluorobenzene	93%	Conc: 46.4	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC2-S23
3J06120-07 (Water) Sampled: 10/02/23 4:15 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0645 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:16 **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/09/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	97%	Conc: 9.43	70-130			10/09/23	
----------------	-----	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12

Batch ID: W3J0652 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:33 **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/09/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06

Batch ID: W3J0818 **Preparation:** EPA 537/SPE **Prepared:** 10/11/23 08:11 **Analyst:** rjr

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/12/23	
ADONA	ND	0.49	1.8	ng/l	1	10/12/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/12/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/12/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/12/23	
PFBS	ND	0.51	1.8	ng/l	1	10/12/23	
PFDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFDaA	ND	0.58	1.8	ng/l	1	10/12/23	
PFHpA	ND	0.48	1.8	ng/l	1	10/12/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/12/23	
PFHxS	ND	0.53	1.8	ng/l	1	10/12/23	
PFNA	ND	0.46	1.8	ng/l	1	10/12/23	
PFOA	ND	0.59	1.8	ng/l	1	10/12/23	
PFOS	ND	0.47	1.8	ng/l	1	10/12/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/12/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/12/23	

Surrogate(s)

13C2-PFDA	119%	Conc: 42.4	70-130			10/12/23	
13C2-PFHxA	118%	Conc: 42.0	70-130			10/12/23	
d5-EtFOSAA	130%	Conc: 186	70-130			10/12/23	
HFPO-DA-13C3	118%	Conc: 41.9	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0660 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:41 **Analyst:** ADM

3J06120

Page 27 of 49

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC2-S23
3J06120-07 (Water) Sampled: 10/02/23 4:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC2-S23
3J06120-07 (Water) Sampled: 10/02/23 4:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41			Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC2-S23
 3J06120-07 (Water) Sampled: 10/02/23 4:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	98%	Conc: 48.9	70-130			10/09/23	
4-Bromofluorobenzene	92%	Conc: 46.2	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC1-S23
3J06120-08 (Water) Sampled: 10/02/23 4:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0645

Preparation: EPA 522/SPE

Prepared: 10/09/23 08:16

Analyst: mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/09/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	99%	Conc: 10.1	70-130			10/09/23	
----------------	-----	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W3J0652

Preparation: EPA 5030B

Prepared: 10/09/23 08:33

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/09/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J0818

Preparation: EPA 537/SPE

Prepared: 10/11/23 08:11

Analyst: rjr

11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/12/23	
ADONA	ND	0.49	1.8	ng/l	1	10/12/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/12/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/12/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/12/23	
PFBS	ND	0.51	1.8	ng/l	1	10/12/23	
PFDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFDaA	ND	0.58	1.8	ng/l	1	10/12/23	
PFHpA	ND	0.47	1.8	ng/l	1	10/12/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/12/23	
PFHxS	ND	0.52	1.8	ng/l	1	10/12/23	
PFNA	ND	0.46	1.8	ng/l	1	10/12/23	
PFOA	ND	0.59	1.8	ng/l	1	10/12/23	
PFOS	ND	0.47	1.8	ng/l	1	10/12/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/12/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/12/23	

Surrogate(s)

13C2-PFDA	118%	Conc: 41.6	70-130			10/12/23	
13C2-PFHxA	119%	Conc: 42.0	70-130			10/12/23	
d5-EtFOSAA	129%	Conc: 182	70-130			10/12/23	
HFPO-DA-13C3	116%	Conc: 40.9	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

3J06120

Page 31 of 49

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC1-S23
3J06120-08 (Water) Sampled: 10/02/23 4:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41			Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	3.8	3.1	5.0	ug/l	1	10/09/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC1-S23
3J06120-08 (Water) Sampled: 10/02/23 4:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC1-S23
 3J06120-08 (Water) Sampled: 10/02/23 4:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	94%	Conc: 47.0	70-130			10/09/23	
4-Bromofluorobenzene	91%	Conc: 45.5	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC2-S23
3J06120-09 (Water) Sampled: 10/02/23 1:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0645 **Prepared:** 10/09/23 08:16
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	104%	Conc: 10.6	70-130			10/09/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0652 **Prepared:** 10/09/23 08:33
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/09/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J0818 **Prepared:** 10/11/23 08:11
Preparation: EPA 537/SPE **Analyst:** rjr

11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/12/23	
ADONA	ND	0.55	2.0	ng/l	1	10/12/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/12/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/12/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/12/23	
PFBS	ND	0.58	2.0	ng/l	1	10/12/23	
PFDA	ND	0.45	2.0	ng/l	1	10/12/23	
PFDaA	ND	0.66	2.0	ng/l	1	10/12/23	
PFHpA	ND	0.53	2.0	ng/l	1	10/12/23	
PFHxA	ND	0.49	2.0	ng/l	1	10/12/23	
PFHxS	ND	0.59	2.0	ng/l	1	10/12/23	
PFNA	ND	0.52	2.0	ng/l	1	10/12/23	
PFOA	ND	0.67	2.0	ng/l	1	10/12/23	
PFOS	ND	0.53	2.0	ng/l	1	10/12/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/12/23	
PFTTrDA	ND	0.42	2.0	ng/l	1	10/12/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/12/23	
<i>Surrogate(s)</i>							
13C2-PFDA	120%	Conc: 44.4	70-130			10/12/23	
13C2-PFHxA	122%	Conc: 45.0	70-130			10/12/23	
d5-EtFOSAA	126%	Conc: 186	70-130			10/12/23	
HFPO-DA-13C3	118%	Conc: 43.4	70-130			10/12/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0660 **Prepared:** 10/09/23 08:41
Preparation: EPA 5030B **Analyst:** ADM

3J06120

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC2-S23
3J06120-09 (Water) Sampled: 10/02/23 1:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41			Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC2-S23
3J06120-09 (Water) Sampled: 10/02/23 1:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GACC2-S23
 3J06120-09 (Water) Sampled: 10/02/23 1:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	97%	Conc: 48.3	70-130			10/09/23	
4-Bromofluorobenzene	94%	Conc: 46.8	70-130			10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0645 - EPA 522											
Blank (W3J0645-BLK1)					Prepared & Analyzed: 10/09/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.0			ug/l	10.0		100	70-130			
LCS (W3J0645-BS1)					Prepared & Analyzed: 10/09/23						
1,4-Dioxane	1.90	0.028	0.070	ug/l	2.00		95	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.0			ug/l	10.0		100	70-130			
LCS Dup (W3J0645-BSD1)					Prepared & Analyzed: 10/09/23						
1,4-Dioxane	2.11	0.028	0.070	ug/l	2.00		105	70-130	11	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.5			ug/l	10.0		105	70-130			

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0652 - SRL 524M-TCP											
Blank (W3J0652-BLK1)					Prepared & Analyzed: 10/09/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W3J0652-BS1)					Prepared & Analyzed: 10/09/23						
1,2,3-Trichloropropane	0.0203	0.0012	0.0050	ug/l	0.0200		101	80-120			
LCS Dup (W3J0652-BSD1)					Prepared & Analyzed: 10/09/23						
1,2,3-Trichloropropane	0.0187	0.0012	0.0050	ug/l	0.0200		94	80-120	8	20	
Duplicate (W3J0652-DUP1)					Prepared & Analyzed: 10/09/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0818 - EPA 537.1											
Blank (W3J0818-BLK1)											
Prepared: 10/11/23 Analyzed: 10/12/23											
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	45.1			ng/l	40.0		113	70-130			
13C2-PFHxA	46.1			ng/l	40.0		115	70-130			
d5-EtFOSAA	200			ng/l	160		125	70-130			
HFPO-DA-13C3	42.6			ng/l	40.0		107	70-130			
LCS (W3J0818-BS1)											
Prepared: 10/11/23 Analyzed: 10/12/23											
11CI-PF3OUdS	20.2	0.56	2.0	ng/l	20.0		101	70-130			
9CI-PF3ONS	21.3	0.53	2.0	ng/l	20.0		106	70-130			
ADONA	22.5	0.55	2.0	ng/l	20.0		113	70-130			
EtFOSAA	22.0	0.48	2.0	ng/l	20.0		110	70-130			
HFPO-DA	21.9	0.87	2.0	ng/l	20.0		110	70-130			
MeFOSAA	22.8	0.58	2.0	ng/l	20.0		114	70-130			
PFBS	22.6	0.58	2.0	ng/l	20.0		113	70-130			
PFDA	20.4	0.45	2.0	ng/l	20.0		102	70-130			
PFDoA	20.2	0.66	2.0	ng/l	20.0		101	70-130			
PFHpA	23.2	0.53	2.0	ng/l	20.0		116	70-130			
PFHxA	20.8	0.49	2.0	ng/l	20.0		104	70-130			
PFHxS	24.3	0.59	2.0	ng/l	20.0		121	70-130			
PFNA	22.9	0.52	2.0	ng/l	20.0		115	70-130			
PFOA	23.3	0.67	2.0	ng/l	20.0		116	70-130			
PFOS	22.1	0.53	2.0	ng/l	20.0		111	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0818 - EPA 537.1 (Continued)											
LCS (W3J0818-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
PFTeDA	22.0	0.45	2.0	ng/l	20.0		110	70-130			
PFTTrDA	21.2	0.42	2.0	ng/l	20.0		106	70-130			
PFUnA	22.6	0.48	2.0	ng/l	20.0		113	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	45.3			ng/l	40.0		113	70-130			
13C2-PFHxA	43.7			ng/l	40.0		109	70-130			
d5-EtFOSAA	196			ng/l	160		123	70-130			
HFPO-DA-13C3	44.0			ng/l	40.0		110	70-130			
LCS Dup (W3J0818-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
11CI-PF3OUdS	20.1	0.56	2.0	ng/l	20.0		101	70-130	0.4	30	
9CI-PF3ONS	21.0	0.53	2.0	ng/l	20.0		105	70-130	1	30	
ADONA	21.8	0.55	2.0	ng/l	20.0		109	70-130	3	30	
EtFOSAA	22.6	0.48	2.0	ng/l	20.0		113	70-130	3	30	
HFPO-DA	21.9	0.87	2.0	ng/l	20.0		110	70-130	0.006	30	
MeFOSAA	22.5	0.58	2.0	ng/l	20.0		113	70-130	1	30	
PFBS	22.6	0.58	2.0	ng/l	20.0		113	70-130	0.2	30	
PFDA	20.1	0.45	2.0	ng/l	20.0		101	70-130	1	30	
PFDoA	20.5	0.66	2.0	ng/l	20.0		102	70-130	1	30	
PFHpA	22.5	0.53	2.0	ng/l	20.0		113	70-130	3	30	
PFHxA	22.3	0.49	2.0	ng/l	20.0		111	70-130	7	30	
PFHxS	24.2	0.59	2.0	ng/l	20.0		121	70-130	0.1	30	
PFNA	23.0	0.52	2.0	ng/l	20.0		115	70-130	0.2	30	
PFOA	22.9	0.67	2.0	ng/l	20.0		114	70-130	2	30	
PFOS	22.4	0.53	2.0	ng/l	20.0		112	70-130	1	30	
PFTeDA	21.9	0.45	2.0	ng/l	20.0		110	70-130	0.5	30	
PFTTrDA	21.8	0.42	2.0	ng/l	20.0		109	70-130	3	30	
PFUnA	23.2	0.48	2.0	ng/l	20.0		116	70-130	3	30	
<i>Surrogate(s)</i>											
13C2-PFDA	45.1			ng/l	40.0		113	70-130			
13C2-PFHxA	45.5			ng/l	40.0		114	70-130			
d5-EtFOSAA	204			ng/l	160		128	70-130			
HFPO-DA-13C3	43.5			ng/l	40.0		109	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC		RPD		Qualifier
								Limits	RPD	Limit		
Batch: W3J0660 - EPA 524.2												
Blank (W3J0660-BLK1)						Prepared & Analyzed: 10/09/23						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l								
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l								
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l								
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l								
1,1-Dichloroethane	ND	0.27	0.50	ug/l								
1,1-Dichloroethene	ND	0.16	0.50	ug/l								
1,1-Dichloropropene	ND	0.14	0.50	ug/l								
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l								
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l								
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l								
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l								
1,2-Dichloroethane	ND	0.24	0.50	ug/l								
1,2-Dichloropropane	ND	0.13	0.50	ug/l								
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l								
1,3-Dichloropropane	ND	0.27	0.50	ug/l								
1,3-Dichloropropene, Total	ND		0.50	ug/l								
2,2-Dichloropropane	ND	0.17	0.50	ug/l								
2-Butanone	ND	1.5	5.0	ug/l								
2-Chlorotoluene	ND	0.15	0.50	ug/l								
2-Hexanone	ND	1.2	5.0	ug/l								
4-Chlorotoluene	ND	0.15	0.50	ug/l								
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l								
Acetone	ND	3.1	5.0	ug/l								
Acrylonitrile	ND	1.5	2.0	ug/l								
Benzene	ND	0.15	0.50	ug/l								
Bromobenzene	ND	0.15	0.50	ug/l								
Bromochloromethane	ND	0.15	0.50	ug/l								
Bromodichloromethane	ND	0.24	0.50	ug/l								
Bromoform	ND	0.38	0.50	ug/l								
Bromomethane	ND	0.27	0.50	ug/l								
Carbon Disulfide	ND	0.25	0.50	ug/l								
Carbon tetrachloride	ND	0.27	0.50	ug/l								
Chlorobenzene	ND	0.15	0.50	ug/l								
Chloroethane	ND	0.17	0.50	ug/l								
Chloroform	ND	0.27	0.50	ug/l								
Chloromethane	ND	0.23	0.50	ug/l								
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l								
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l								
Dibromochloromethane	ND	0.20	0.50	ug/l								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
Blank (W3J0660-BLK1)					Prepared & Analyzed: 10/09/23						
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0		93	70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91	70-130			
LCS (W3J0660-BS1)					Prepared & Analyzed: 10/09/23						
1,1,1,2-Tetrachloroethane	4.85	0.24	0.50	ug/l	5.00		97	70-130			
1,1,1-Trichloroethane	5.07	0.26	0.50	ug/l	5.00		101	70-130			
1,1,2,2-Tetrachloroethane	5.00	0.20	0.50	ug/l	5.00		100	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)										
LCS (W3J0660-BS1)					Prepared & Analyzed: 10/09/23					
1,1,2-Trichloroethane	4.83	0.19	0.50	ug/l	5.00		97 70-130			
1,1-Dichloroethane	5.27	0.27	0.50	ug/l	5.00		105 70-130			
1,1-Dichloroethene	4.50	0.16	0.50	ug/l	5.00		90 70-130			
1,1-Dichloropropene	4.03	0.14	0.50	ug/l	5.00		81 70-130			
1,2,3-Trichlorobenzene	4.67	0.40	0.50	ug/l	5.00		93 70-130			
1,2,3-Trichloropropane	5.08	0.22	0.50	ug/l	5.00		102 70-130			
1,2,4-Trichlorobenzene	4.51	0.17	0.50	ug/l	5.00		90 70-130			
1,2,4-Trimethylbenzene	4.84	0.20	0.50	ug/l	5.00		97 70-130			
1,2-Dichloroethane	4.70	0.24	0.50	ug/l	5.00		94 70-130			
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00		95 70-130			
1,3,5-Trimethylbenzene	4.77	0.17	0.50	ug/l	5.00		95 70-130			
1,3-Dichloropropane	4.89	0.27	0.50	ug/l	5.00		98 70-130			J
2,2-Dichloropropane	5.28	0.17	0.50	ug/l	5.00		106 70-130			
2-Butanone	5.34	1.5	5.0	ug/l	5.00		107 70-130			
2-Chlorotoluene	5.12	0.15	0.50	ug/l	5.00		102 70-130			
2-Hexanone	4.89	1.2	5.0	ug/l	5.00		98 70-130			J
4-Chlorotoluene	5.06	0.15	0.50	ug/l	5.00		101 70-130			
4-Methyl-2-pentanone	4.70	1.8	5.0	ug/l	5.00		94 70-130			J
Acetone	48.9	3.1	5.0	ug/l	50.0		98 70-130			
Benzene	4.57	0.15	0.50	ug/l	5.00		91 70-130			
Bromobenzene	4.94	0.15	0.50	ug/l	5.00		99 70-130			
Bromochloromethane	4.71	0.15	0.50	ug/l	5.00		94 70-130			
Bromodichloromethane	4.87	0.24	0.50	ug/l	5.00		97 70-130			
Bromoform	4.60	0.38	0.50	ug/l	5.00		92 70-130			
Bromomethane	4.57	0.27	0.50	ug/l	5.00		91 70-130			
Carbon Disulfide	4.29	0.25	0.50	ug/l	5.00		86 70-130			
Carbon tetrachloride	4.44	0.27	0.50	ug/l	5.00		89 70-130			
Chlorobenzene	4.62	0.15	0.50	ug/l	5.00		92 70-130			
Chloroethane	4.58	0.17	0.50	ug/l	5.00		92 70-130			
Chloroform	5.20	0.27	0.50	ug/l	5.00		104 70-130			
Chloromethane	5.85	0.23	0.50	ug/l	5.00		117 70-130			
cis-1,2-Dichloroethene	5.15	0.25	0.50	ug/l	5.00		103 70-130			
cis-1,3-Dichloropropene	4.12	0.30	0.50	ug/l	5.00		82 70-130			
Dibromochloromethane	4.72	0.20	0.50	ug/l	5.00		94 70-130			
Dibromomethane	4.86	0.20	0.50	ug/l	5.00		97 70-130			
Dichlorodifluoromethane (Freon 12)	4.69	0.45	0.50	ug/l	5.00		94 70-130			
Di-isopropyl ether	20.9	1.1	2.0	ug/l	20.0		105 70-130			
Ethyl tert-butyl ether	21.1	1.0	2.0	ug/l	20.0		105 70-130			
Ethylbenzene	4.29	0.21	0.50	ug/l	5.00		86 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)										
LCS (W3J0660-BS1)					Prepared & Analyzed: 10/09/23					
Freon 113	4.71	1.5	5.0	ug/l	5.00		94 70-130			J
Hexachlorobutadiene	4.07	0.40	0.50	ug/l	5.00		81 70-130			
Isopropylbenzene	4.30	0.18	0.50	ug/l	5.00		86 70-130			
m,p-Xylene	4.47	0.33	0.50	ug/l	5.00		89 70-130			
m-Dichlorobenzene	5.03	0.14	0.50	ug/l	5.00		101 70-130			
Methyl tert-butyl ether (MTBE)	20.8	0.94	2.0	ug/l	20.0		104 70-130			
Methylene chloride	5.33	0.30	0.50	ug/l	5.00		107 70-130			
Naphthalene	4.52	0.35	0.50	ug/l	5.00		90 70-130			
n-Butylbenzene	4.78	0.29	0.50	ug/l	5.00		96 70-130			
n-Propylbenzene	5.03	0.18	0.50	ug/l	5.00		101 70-130			
o-Dichlorobenzene	5.21	0.19	0.50	ug/l	5.00		104 70-130			
o-Xylene	4.77	0.20	0.50	ug/l	5.00		95 70-130			
p-Dichlorobenzene	5.04	0.18	0.50	ug/l	5.00		101 70-130			
p-Isopropyltoluene	4.78	0.25	0.50	ug/l	5.00		96 70-130			
sec-Butylbenzene	4.73	0.24	0.50	ug/l	5.00		95 70-130			
Styrene	4.61	0.19	0.50	ug/l	5.00		92 70-130			
Tert-amyl methyl ether	21.5	0.59	2.0	ug/l	20.0		107 70-130			
tert-Butylbenzene	4.52	0.18	0.50	ug/l	5.00		90 70-130			
Tetrachloroethene	4.36	0.18	0.50	ug/l	5.00		87 70-130			
Toluene	4.87	0.29	0.50	ug/l	5.00		97 70-130			
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100 70-130			
trans-1,3-Dichloropropene	4.78	0.32	0.50	ug/l	5.00		96 70-130			
Trichloroethene	4.40	0.18	0.50	ug/l	5.00		88 70-130			
Trichlorofluoromethane	4.70	0.18	0.50	ug/l	5.00		94 70-130			
Vinyl chloride	5.62	0.18	0.50	ug/l	5.00		112 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109 70-130			
4-Bromofluorobenzene	49.6			ug/l	50.0		99 70-130			
LCS Dup (W3J0660-BSD1)					Prepared & Analyzed: 10/09/23					
1,1,1,2-Tetrachloroethane	4.79	0.24	0.50	ug/l	5.00		96 70-130	1	30	
1,1,1-Trichloroethane	4.75	0.26	0.50	ug/l	5.00		95 70-130	6	30	
1,1,2,2-Tetrachloroethane	4.83	0.20	0.50	ug/l	5.00		97 70-130	3	30	
1,1,2-Trichloroethane	4.72	0.19	0.50	ug/l	5.00		94 70-130	2	30	
1,1-Dichloroethane	5.97	0.27	0.50	ug/l	5.00		119 70-130	12	30	
1,1-Dichloroethene	4.58	0.16	0.50	ug/l	5.00		92 70-130	2	30	
1,1-Dichloropropene	3.81	0.14	0.50	ug/l	5.00		76 70-130	5	30	
1,2,3-Trichlorobenzene	4.76	0.40	0.50	ug/l	5.00		95 70-130	2	30	
1,2,3-Trichloropropane	4.93	0.22	0.50	ug/l	5.00		99 70-130	3	30	
1,2,4-Trichlorobenzene	4.62	0.17	0.50	ug/l	5.00		92 70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
LCS Dup (W3J0660-BSD1)					Prepared & Analyzed: 10/09/23						
1,2,4-Trimethylbenzene	4.58	0.20	0.50	ug/l	5.00		92	70-130	5	30	
1,2-Dichloroethane	4.71	0.24	0.50	ug/l	5.00		94	70-130	0.03	30	
1,2-Dichloropropane	4.51	0.13	0.50	ug/l	5.00		90	70-130	5	30	
1,3,5-Trimethylbenzene	4.53	0.17	0.50	ug/l	5.00		91	70-130	5	30	
1,3-Dichloropropane	4.68	0.27	0.50	ug/l	5.00		94	70-130	4	30	
2,2-Dichloropropane	5.54	0.17	0.50	ug/l	5.00		111	70-130	5	30	
2-Butanone	5.65	1.5	5.0	ug/l	5.00		113	70-130	6	30	
2-Chlorotoluene	4.82	0.15	0.50	ug/l	5.00		96	70-130	6	30	
2-Hexanone	5.01	1.2	5.0	ug/l	5.00		100	70-130	2	30	
4-Chlorotoluene	4.79	0.15	0.50	ug/l	5.00		96	70-130	5	30	
4-Methyl-2-pentanone	4.64	1.8	5.0	ug/l	5.00		93	70-130	1	30	J
Acetone	52.8	3.1	5.0	ug/l	50.0		106	70-130	8	30	
Benzene	4.40	0.15	0.50	ug/l	5.00		88	70-130	4	30	
Bromobenzene	4.72	0.15	0.50	ug/l	5.00		94	70-130	4	30	
Bromochloromethane	5.49	0.15	0.50	ug/l	5.00		110	70-130	15	30	
Bromodichloromethane	4.79	0.24	0.50	ug/l	5.00		96	70-130	2	30	
Bromoform	4.63	0.38	0.50	ug/l	5.00		93	70-130	0.7	30	
Bromomethane	4.71	0.27	0.50	ug/l	5.00		94	70-130	3	30	
Carbon Disulfide	4.37	0.25	0.50	ug/l	5.00		87	70-130	2	30	
Carbon tetrachloride	4.28	0.27	0.50	ug/l	5.00		86	70-130	4	30	
Chlorobenzene	4.73	0.15	0.50	ug/l	5.00		95	70-130	2	30	
Chloroethane	4.64	0.17	0.50	ug/l	5.00		93	70-130	1	30	
Chloroform	5.60	0.27	0.50	ug/l	5.00		112	70-130	7	30	
Chloromethane	5.96	0.23	0.50	ug/l	5.00		119	70-130	2	30	
cis-1,2-Dichloroethene	5.54	0.25	0.50	ug/l	5.00		111	70-130	7	30	
cis-1,3-Dichloropropene	4.18	0.30	0.50	ug/l	5.00		84	70-130	1	30	
Dibromochloromethane	4.72	0.20	0.50	ug/l	5.00		94	70-130	0.05	30	
Dibromomethane	4.81	0.20	0.50	ug/l	5.00		96	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	4.55	0.45	0.50	ug/l	5.00		91	70-130	3	30	
Di-isopropyl ether	24.2	1.1	2.0	ug/l	20.0		121	70-130	14	30	
Ethyl tert-butyl ether	22.2	1.0	2.0	ug/l	20.0		111	70-130	5	30	
Ethylbenzene	4.17	0.21	0.50	ug/l	5.00		83	70-130	3	30	
Freon 113	4.49	1.5	5.0	ug/l	5.00		90	70-130	5	30	J
Hexachlorobutadiene	4.40	0.40	0.50	ug/l	5.00		88	70-130	8	30	
Isopropylbenzene	4.16	0.18	0.50	ug/l	5.00		83	70-130	3	30	
m,p-Xylene	4.34	0.33	0.50	ug/l	5.00		87	70-130	3	30	
m-Dichlorobenzene	4.98	0.14	0.50	ug/l	5.00		100	70-130	0.9	30	
Methyl tert-butyl ether (MTBE)	24.2	0.94	2.0	ug/l	20.0		121	70-130	15	30	
Methylene chloride	5.79	0.30	0.50	ug/l	5.00		116	70-130	8	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
LCS Dup (W3J0660-BSD1)					Prepared & Analyzed: 10/09/23						
Naphthalene	4.63	0.35	0.50	ug/l	5.00		93	70-130	2	30	
n-Butylbenzene	4.53	0.29	0.50	ug/l	5.00		91	70-130	5	30	
n-Propylbenzene	4.68	0.18	0.50	ug/l	5.00		94	70-130	7	30	
o-Dichlorobenzene	5.11	0.19	0.50	ug/l	5.00		102	70-130	2	30	
o-Xylene	4.66	0.20	0.50	ug/l	5.00		93	70-130	2	30	
p-Dichlorobenzene	5.03	0.18	0.50	ug/l	5.00		101	70-130	0.04	30	
p-Isopropyltoluene	4.55	0.25	0.50	ug/l	5.00		91	70-130	5	30	
sec-Butylbenzene	4.55	0.24	0.50	ug/l	5.00		91	70-130	4	30	
Styrene	4.49	0.19	0.50	ug/l	5.00		90	70-130	3	30	
Tert-amyl methyl ether	21.1	0.59	2.0	ug/l	20.0		106	70-130	2	30	
tert-Butylbenzene	4.37	0.18	0.50	ug/l	5.00		87	70-130	3	30	
Tetrachloroethene	4.10	0.18	0.50	ug/l	5.00		82	70-130	6	30	
Toluene	4.67	0.29	0.50	ug/l	5.00		93	70-130	4	30	
trans-1,2-Dichloroethene	5.55	0.26	0.50	ug/l	5.00		111	70-130	11	30	
trans-1,3-Dichloropropene	4.72	0.32	0.50	ug/l	5.00		94	70-130	1	30	
Trichloroethene	4.18	0.18	0.50	ug/l	5.00		84	70-130	5	30	
Trichlorofluoromethane	4.47	0.18	0.50	ug/l	5.00		89	70-130	5	30	
Vinyl chloride	5.76	0.18	0.50	ug/l	5.00		115	70-130	2	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109	70-130			
4-Bromofluorobenzene	51.3			ug/l	50.0		103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/20/2023 16:42

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3506120**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150%	
PROJECT MANAGER Chris Kindle		SAMPLER Invoice to Rose Ford, Rford@BrwnCald.com						<input type="checkbox"/> 24 Hour Rush 100%	
								<input type="checkbox"/> 48-72 Hour Rush 75%	
								<input type="checkbox"/> 4 - 5 Day Rush 30%	
								<input type="checkbox"/> Rush Extractions 50%	
								<input type="checkbox"/> 10 - 15 Business Days	
								<input type="checkbox"/> QA/QC Data Package	

Charges will apply for weekends/holidays

Method of Shipment:

COMMENTS

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA						
	10/2/23	4:40		PT-GAC2-S11	9	X	X	X	X						
	10/2/23	3:12		PT-GAC1-S23	9	X	X	X	X						
	10/2/23	1:50		PT-GACC2-S11	9	X	X	X	X						
	10/2/23	4:57		PT-GAC3-S23	9	X	X	X	X						
	10/2/23	4:35		PT-GAC1-S11	9	X	X	X	X						
	10/2/23	3:37		PT-GAC1-S11	9	X	X	X	X						
	10/2/23	4:15		PT-GAC2-S23	9	X	X	X	X						
	10/2/23	4:10		PT-GAC1-S23	9	X	X	X	X						
	10/2/23	1:25		PT-GACC2-S23	9	X	X	X	X						

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/3/23 1:35	RECEIVED BY Magaly S. 10-3-23	13:30	SAMPLE CONDITION: Actual Temperature: Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY Magaly S	DATE / TIME 10-3-23 / 15:14	RECEIVED BY <i>[Signature]</i> 10/2/23 15:14			
RELINQUISHED BY	DATE / TIME	RECEIVED BY			

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



Sample Receipt Checklist

Weck WKO: **3J06120**
 WKO Logged by: Jaime Gomez
 Samples Checked by: Jaime Gomez

Date/Time Received: 10/06/23 15:14
 # of Samples: 09
 Delivered by: RMS

Task	Yes	No	N/A	Comments
COC				
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		18.6 °C
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?				pH paper Lot#
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH Reading?
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Amt. added.
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jaime Gomez

Date: 10/06/23

Work Orders: 3J06122

Report Date: 11/20/2023

Project: COSM 97-005

Received Date: 10/3/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

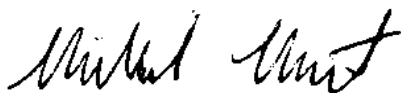
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/03/23 with the Chain-of-Custody document. The samples were received in good condition, at 18.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:39

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UVC2-S10	Client	3J06122-01	Water	10/02/23 01:10	
PT-UV1-S10	Client	3J06122-02	Water	10/02/23 03:35	
PT-UV2-S10	Client	3J06122-03	Water	10/02/23 03:40	
PT-UVC1-S10	Client	3J06122-04	Water	10/02/23 03:37	
PT-UV3-S10	Client	3J06122-05	Water	10/02/23 04:22	
PFOA Field Blank	Client	3J06122-06	Water	10/02/23 04:22	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9Cl-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFUnA	2058-94-8		✓
11Cl-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:39

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UVC2-S10
3J06122-01 (Water) Sampled: 10/02/23 1:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12						
Batch ID: W3J0655	Preparation: EPA 5030B						
Prepared: 10/09/23 08:35	Analyst: ADM						
1,2,3-Trichloropropane	0.022	0.0012	0.0050	ug/l	1	10/10/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06						
Batch ID: W3J0818	Preparation: EPA 537/SPE						
Prepared: 10/11/23 08:11	Analyst: rjr						
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/12/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/12/23	
ADONA	ND	0.49	1.8	ng/l	1	10/12/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/12/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/12/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/12/23	
PFBS	2.9	0.51	1.8	ng/l	1	10/12/23	
PFDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFDoA	ND	0.58	1.8	ng/l	1	10/12/23	
PFHpA	1.3	0.47	1.8	ng/l	1	10/12/23	J
PFHxA	5.5	0.43	1.8	ng/l	1	10/12/23	
PFHxS	3.1	0.52	1.8	ng/l	1	10/12/23	
PFNA	ND	0.46	1.8	ng/l	1	10/12/23	
PFOA	2.1	0.59	1.8	ng/l	1	10/12/23	
PFOS	ND	0.47	1.8	ng/l	1	10/12/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/12/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/12/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/12/23	

Surrogate(s)

13C2-PFDA	107%	Conc: 37.6	70-130	10/12/23
13C2-PFHxA	106%	Conc: 37.6	70-130	10/12/23
d5-EtFOSAA	116%	Conc: 164	70-130	10/12/23
HFPO-DA-13C3	106%	Conc: 37.6	70-130	10/12/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV1-S10
3J06122-02 (Water) Sampled: 10/02/23 3:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12	
Batch ID: W3J0656	Preparation: EPA 5030B	Prepared: 10/09/23 08:36	Analyst: ADM
1,2,3-Trichloropropane	0.0099	0.0012	0.0050 ug/l 1 10/10/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06	
Batch ID: W3J1268	Preparation: EPA 537/SPE	Prepared: 10/15/23 08:11	Analyst: jna
11CI-PF3OUdS	ND	0.49	1.7 ng/l 1 10/18/23
9CI-PF3ONS	ND	0.46	1.7 ng/l 1 10/18/23
ADONA	ND	0.48	1.7 ng/l 1 10/18/23
EtFOSAA	ND	0.42	1.7 ng/l 1 10/18/23
HFPO-DA	ND	0.76	1.7 ng/l 1 10/18/23
MeFOSAA	ND	0.50	1.7 ng/l 1 10/18/23
PFBS	2.9	0.50	1.7 ng/l 1 10/18/23
PFDA	ND	0.39	1.7 ng/l 1 10/18/23
PFDoA	ND	0.57	1.7 ng/l 1 10/18/23
PFHpA	1.3	0.47	1.7 ng/l 1 10/18/23
PFHxA	5.1	0.42	1.7 ng/l 1 10/18/23
PFHxS	2.7	0.52	1.7 ng/l 1 10/18/23
PFNA	ND	0.45	1.7 ng/l 1 10/18/23
PFOA	2.1	0.58	1.7 ng/l 1 10/18/23
PFOS	ND	0.46	1.7 ng/l 1 10/18/23
PFTeDA	ND	0.39	1.7 ng/l 1 10/18/23
PFTTrDA	ND	0.36	1.7 ng/l 1 10/18/23
PFUnA	ND	0.41	1.7 ng/l 1 10/18/23

Surrogate(s)

13C2-PFDA	95%	Conc: 33.0	70-130	10/18/23
13C2-PFHxA	96%	Conc: 33.4	70-130	10/18/23
d5-EtFOSAA	109%	Conc: 152	70-130	10/18/23
HFPO-DA-13C3	93%	Conc: 32.5	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV2-S10
3J06122-03 (Water) Sampled: 10/02/23 3:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0656	Preparation: EPA 5030B			Prepared: 10/09/23 08:36	Analyst: ADM		
1,2,3-Trichloropropane	0.011	0.0012	0.0050	ug/l	1	10/10/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1268	Preparation: EPA 537/SPE			Prepared: 10/15/23 08:11	Analyst: jna		
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/18/23	
ADONA	ND	0.55	2.0	ng/l	1	10/18/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/18/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/18/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/18/23	
PFBS	2.9	0.58	2.0	ng/l	1	10/18/23	
PFDA	ND	0.45	2.0	ng/l	1	10/18/23	
PFDoA	ND	0.66	2.0	ng/l	1	10/18/23	
PFHpA	1.3	0.53	2.0	ng/l	1	10/18/23	J
PFHxA	5.0	0.49	2.0	ng/l	1	10/18/23	
PFHxS	2.5	0.59	2.0	ng/l	1	10/18/23	
PFNA	ND	0.52	2.0	ng/l	1	10/18/23	
PFOA	2.1	0.67	2.0	ng/l	1	10/18/23	
PFOS	ND	0.53	2.0	ng/l	1	10/18/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/18/23	
PFTTrDA	ND	0.42	2.0	ng/l	1	10/18/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	93%	Conc: 34.8	70-130	10/18/23
13C2-PFHxA	94%	Conc: 35.1	70-130	10/18/23
d5-EtFOSAA	110%	Conc: 164	70-130	10/18/23
HFPO-DA-13C3	92%	Conc: 34.3	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UVC1-S10
3J06122-04 (Water) Sampled: 10/02/23 3:37 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0656	Preparation: EPA 5030B			Prepared: 10/09/23 08:36	Analyst: ADM		
1,2,3-Trichloropropane	0.021	0.0012	0.0050	ug/l	1	10/10/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1268	Preparation: EPA 537/SPE			Prepared: 10/15/23 08:11	Analyst: jna		
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/18/23	
ADONA	ND	0.49	1.8	ng/l	1	10/18/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/18/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/18/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/18/23	
PFBS	2.9	0.51	1.8	ng/l	1	10/18/23	
PFDA	ND	0.40	1.8	ng/l	1	10/18/23	
PFDoA	ND	0.58	1.8	ng/l	1	10/18/23	
PFHpA	1.3	0.47	1.8	ng/l	1	10/18/23	J
PFHxA	5.1	0.43	1.8	ng/l	1	10/18/23	
PFHxS	2.6	0.52	1.8	ng/l	1	10/18/23	
PFNA	ND	0.46	1.8	ng/l	1	10/18/23	
PFOA	2.1	0.59	1.8	ng/l	1	10/18/23	
PFOS	ND	0.47	1.8	ng/l	1	10/18/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/18/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/18/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	95%	Conc: 33.5	70-130	10/18/23
13C2-PFHxA	96%	Conc: 33.8	70-130	10/18/23
d5-EtFOSAA	111%	Conc: 157	70-130	10/18/23
HFPO-DA-13C3	92%	Conc: 32.4	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV3-S10
3J06122-05 (Water) Sampled: 10/02/23 4:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12
Batch ID: W3J0656	Preparation: EPA 5030B
Prepared: 10/09/23 08:36	Analyst: ADM
1,2,3-Trichloropropane	0.0092

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 537.1		Instr: LCMS06					
Batch ID: W3J1268		Preparation: EPA 537/SPE		Prepared: 10/15/23 08:11		Analyst: jna	
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/18/23	
ADONA	ND	0.55	2.0	ng/l	1	10/18/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/18/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/18/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/18/23	
PFBS	2.9	0.58	2.0	ng/l	1	10/18/23	
PFDA	ND	0.45	2.0	ng/l	1	10/18/23	
PFDoA	ND	0.66	2.0	ng/l	1	10/18/23	
PFHpA	1.4	0.53	2.0	ng/l	1	10/18/23	J
PFHxA	5.2	0.49	2.0	ng/l	1	10/18/23	
PFHxS	2.6	0.59	2.0	ng/l	1	10/18/23	
PFNA	ND	0.52	2.0	ng/l	1	10/18/23	
PFOA	2.2	0.67	2.0	ng/l	1	10/18/23	
PFOS	ND	0.53	2.0	ng/l	1	10/18/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/18/23	
PFTrDA	ND	0.42	2.0	ng/l	1	10/18/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	94%	Conc: 35.8	70-130	10/18/23
13C2-PFHxA	94%	Conc: 35.9	70-130	10/18/23
d5-EtFOSAA	108%	Conc: 164	70-130	10/18/23
HFPO-DA-13C3	92%	Conc: 35.1	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:39

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PFOA Field Blank
3J06122-06 (Water) Sampled: 10/02/23 4:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1268

Preparation: EPA 537/SPE

Prepared: 10/15/23 08:11

Analyst: jna

11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/18/23	
ADONA	ND	0.49	1.8	ng/l	1	10/18/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/18/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/18/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/18/23	
PFBS	ND	0.51	1.8	ng/l	1	10/18/23	
PFDA	ND	0.40	1.8	ng/l	1	10/18/23	
PFDoA	ND	0.58	1.8	ng/l	1	10/18/23	
PFHpA	ND	0.47	1.8	ng/l	1	10/18/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/18/23	
PFHxS	ND	0.52	1.8	ng/l	1	10/18/23	
PFNA	ND	0.46	1.8	ng/l	1	10/18/23	
PFOA	ND	0.59	1.8	ng/l	1	10/18/23	
PFOS	ND	0.47	1.8	ng/l	1	10/18/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/18/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/18/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	95%	Conc: 33.5	70-130	10/18/23
13C2-PFHxA	92%	Conc: 32.4	70-130	10/18/23
d5-EtFOSAA	106%	Conc: 150	70-130	10/18/23
HFPO-DA-13C3	84%	Conc: 29.7	70-130	10/18/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:39

Project Manager: Brown & Caldwell

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0655 - SRL 524M-TCP											
Blank (W3J0655-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
						Prepared: 10/09/23 Analyzed: 10/10/23					
LCS (W3J0655-BS1)											
1,2,3-Trichloropropane	0.0193	0.0012	0.0050	ug/l	0.0200		96	80-120			
						Prepared: 10/09/23 Analyzed: 10/10/23					
LCS Dup (W3J0655-BSD1)											
1,2,3-Trichloropropane	0.0200	0.0012	0.0050	ug/l	0.0200		100	80-120	4	20	
						Prepared: 10/09/23 Analyzed: 10/10/23					
Duplicate (W3J0655-DUP1)											
1,2,3-Trichloropropane	0.0229	0.0012	0.0050	ug/l		0.0220			4	20	
						Source: 3J06122-01					
Batch: W3J0656 - SRL 524M-TCP											
Blank (W3J0656-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
						Prepared: 10/09/23 Analyzed: 10/10/23					
LCS (W3J0656-BS1)											
1,2,3-Trichloropropane	0.0197	0.0012	0.0050	ug/l	0.0200		98	80-120			
						Prepared: 10/09/23 Analyzed: 10/10/23					
LCS Dup (W3J0656-BSD1)											
1,2,3-Trichloropropane	0.0192	0.0012	0.0050	ug/l	0.0200		96	80-120	2	20	
						Prepared: 10/09/23 Analyzed: 10/10/23					
Duplicate (W3J0656-DUP1)											
1,2,3-Trichloropropane	0.0101	0.0012	0.0050	ug/l		0.00987			2	20	
						Source: 3J06122-02					

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0818 - EPA 537.1											
Blank (W3J0818-BLK1)						Prepared: 10/11/23 Analyzed: 10/12/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	45.1			ng/l	40.0		113	70-130			
13C2-PFHxA	46.1			ng/l	40.0		115	70-130			
d5-EtFOSAA	200			ng/l	160		125	70-130			
HFPO-DA-13C3	42.6			ng/l	40.0		107	70-130			
LCS (W3J0818-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
11CI-PF3OUdS	20.2	0.56	2.0	ng/l	20.0		101	70-130			
9CI-PF3ONS	21.3	0.53	2.0	ng/l	20.0		106	70-130			
ADONA	22.5	0.55	2.0	ng/l	20.0		113	70-130			
EtFOSAA	22.0	0.48	2.0	ng/l	20.0		110	70-130			
HFPO-DA	21.9	0.87	2.0	ng/l	20.0		110	70-130			
MeFOSAA	22.8	0.58	2.0	ng/l	20.0		114	70-130			
PFBS	22.6	0.58	2.0	ng/l	20.0		113	70-130			
PFDA	20.4	0.45	2.0	ng/l	20.0		102	70-130			
PFDoA	20.2	0.66	2.0	ng/l	20.0		101	70-130			
PFHpA	23.2	0.53	2.0	ng/l	20.0		116	70-130			
PFHxA	20.8	0.49	2.0	ng/l	20.0		104	70-130			
PFHxS	24.3	0.59	2.0	ng/l	20.0		121	70-130			
PFNA	22.9	0.52	2.0	ng/l	20.0		115	70-130			
PFOA	23.3	0.67	2.0	ng/l	20.0		116	70-130			
PFOS	22.1	0.53	2.0	ng/l	20.0		111	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0818 - EPA 537.1 (Continued)											
LCS (W3J0818-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
PFTeDA	22.0	0.45	2.0	ng/l	20.0		110	70-130			
PFTTrDA	21.2	0.42	2.0	ng/l	20.0		106	70-130			
PFUnA	22.6	0.48	2.0	ng/l	20.0		113	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	45.3			ng/l	40.0		113	70-130			
13C2-PFHxA	43.7			ng/l	40.0		109	70-130			
d5-EtFOSAA	196			ng/l	160		123	70-130			
HFPO-DA-13C3	44.0			ng/l	40.0		110	70-130			
LCS Dup (W3J0818-BSD1)						Prepared: 10/11/23 Analyzed: 10/12/23					
11CI-PF3OUdS	20.1	0.56	2.0	ng/l	20.0		101	70-130	0.4	30	
9CI-PF3ONS	21.0	0.53	2.0	ng/l	20.0		105	70-130	1	30	
ADONA	21.8	0.55	2.0	ng/l	20.0		109	70-130	3	30	
EtFOSAA	22.6	0.48	2.0	ng/l	20.0		113	70-130	3	30	
HFPO-DA	21.9	0.87	2.0	ng/l	20.0		110	70-130	0.006	30	
MeFOSAA	22.5	0.58	2.0	ng/l	20.0		113	70-130	1	30	
PFBS	22.6	0.58	2.0	ng/l	20.0		113	70-130	0.2	30	
PFDA	20.1	0.45	2.0	ng/l	20.0		101	70-130	1	30	
PFDoA	20.5	0.66	2.0	ng/l	20.0		102	70-130	1	30	
PFHpA	22.5	0.53	2.0	ng/l	20.0		113	70-130	3	30	
PFHxA	22.3	0.49	2.0	ng/l	20.0		111	70-130	7	30	
PFHxS	24.2	0.59	2.0	ng/l	20.0		121	70-130	0.1	30	
PFNA	23.0	0.52	2.0	ng/l	20.0		115	70-130	0.2	30	
PFOA	22.9	0.67	2.0	ng/l	20.0		114	70-130	2	30	
PFOS	22.4	0.53	2.0	ng/l	20.0		112	70-130	1	30	
PFTeDA	21.9	0.45	2.0	ng/l	20.0		110	70-130	0.5	30	
PFTTrDA	21.8	0.42	2.0	ng/l	20.0		109	70-130	3	30	
PFUnA	23.2	0.48	2.0	ng/l	20.0		116	70-130	3	30	
<i>Surrogate(s)</i>											
13C2-PFDA	45.1			ng/l	40.0		113	70-130			
13C2-PFHxA	45.5			ng/l	40.0		114	70-130			
d5-EtFOSAA	204			ng/l	160		128	70-130			
HFPO-DA-13C3	43.5			ng/l	40.0		109	70-130			
Batch: W3J1268 - EPA 537.1											
Blank (W3J1268-BLK1)						Prepared: 10/15/23 Analyzed: 10/18/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1268 - EPA 537.1 (Continued)											
Blank (W3J1268-BLK1)						Prepared: 10/15/23 Analyzed: 10/18/23					
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	37.1			ng/l	40.0		93	70-130			
13C2-PFHxA	37.8			ng/l	40.0		95	70-130			
d5-EtFOSAA	167			ng/l	160		105	70-130			
HFPO-DA-13C3	36.3			ng/l	40.0		91	70-130			
LCS (W3J1268-BS1)						Prepared: 10/15/23 Analyzed: 10/18/23					
11Cl-PF3OUdS	78.5	0.56	2.0	ng/l	80.0		98	70-130			
9Cl-PF3ONS	77.6	0.53	2.0	ng/l	80.0		97	70-130			
ADONA	72.0	0.55	2.0	ng/l	80.0		90	70-130			
EtFOSAA	74.9	0.48	2.0	ng/l	80.0		94	70-130			
HFPO-DA	70.3	0.87	2.0	ng/l	80.0		88	70-130			
MeFOSAA	77.6	0.58	2.0	ng/l	80.0		97	70-130			
PFBS	76.2	0.58	2.0	ng/l	80.0		95	70-130			
PFDA	68.7	0.45	2.0	ng/l	80.0		86	70-130			
PFDoA	73.8	0.66	2.0	ng/l	80.0		92	70-130			
PFHpA	74.5	0.53	2.0	ng/l	80.0		93	70-130			
PFHxA	71.9	0.49	2.0	ng/l	80.0		90	70-130			
PFHxS	78.5	0.59	2.0	ng/l	80.0		98	70-130			
PFNA	74.0	0.52	2.0	ng/l	80.0		93	70-130			
PFOA	77.6	0.67	2.0	ng/l	80.0		97	70-130			
PFOS	74.9	0.53	2.0	ng/l	80.0		94	70-130			
PFTeDA	73.9	0.45	2.0	ng/l	80.0		92	70-130			
PFTTrDA	64.9	0.42	2.0	ng/l	80.0		81	70-130			
PFUnA	73.9	0.48	2.0	ng/l	80.0		92	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	38.3			ng/l	40.0		96	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1268 - EPA 537.1 (Continued)											
LCS (W3J1268-BS1)						Prepared: 10/15/23 Analyzed: 10/18/23					
<i>Surrogate(s)</i>											
13C2-PFHxA	38.3			ng/l	40.0		96	70-130			
d5-EtFOSAA	170			ng/l	160		106	70-130			
HFPO-DA-13C3	37.6			ng/l	40.0		94	70-130			
LCS Dup (W3J1268-BSD1)						Prepared: 10/15/23 Analyzed: 10/18/23					
11CI-PF3OUdS	78.6	0.56	2.0	ng/l	80.0		98	70-130	0.2	30	
9CI-PF3ONS	79.6	0.53	2.0	ng/l	80.0		100	70-130	3	30	
ADONA	72.9	0.55	2.0	ng/l	80.0		91	70-130	1	30	
EtFOSAA	75.8	0.48	2.0	ng/l	80.0		95	70-130	1	30	
HFPO-DA	69.8	0.87	2.0	ng/l	80.0		87	70-130	0.7	30	
MeFOSAA	77.2	0.58	2.0	ng/l	80.0		97	70-130	0.5	30	
PFBS	76.1	0.58	2.0	ng/l	80.0		95	70-130	0.02	30	
PFDA	68.4	0.45	2.0	ng/l	80.0		85	70-130	0.5	30	
PFDoA	74.6	0.66	2.0	ng/l	80.0		93	70-130	1	30	
PFHpA	73.6	0.53	2.0	ng/l	80.0		92	70-130	1	30	
PFHxA	71.8	0.49	2.0	ng/l	80.0		90	70-130	0.2	30	
PFHxS	75.2	0.59	2.0	ng/l	80.0		94	70-130	4	30	
PFNA	73.7	0.52	2.0	ng/l	80.0		92	70-130	0.4	30	
PFOA	77.4	0.67	2.0	ng/l	80.0		97	70-130	0.4	30	
PFOS	75.2	0.53	2.0	ng/l	80.0		94	70-130	0.4	30	
PFTeDA	73.1	0.45	2.0	ng/l	80.0		91	70-130	1	30	
PFTrDA	64.8	0.42	2.0	ng/l	80.0		81	70-130	0.2	30	
PFUnA	74.2	0.48	2.0	ng/l	80.0		93	70-130	0.4	30	
<i>Surrogate(s)</i>											
13C2-PFDA	37.5			ng/l	40.0		94	70-130			
13C2-PFHxA	37.8			ng/l	40.0		95	70-130			
d5-EtFOSAA	173			ng/l	160		108	70-130			
HFPO-DA-13C3	37.8			ng/l	40.0		95	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/20/2023 16:39

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3J00122**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input checked="" type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindle		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com							

Charges will apply for weekends/holidays
 Method of Shipment:
 COMMENTS

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA
	10/2/23	1:10	G	PT-UVC2-810	4			X	X
	10/2/23	3:35	G	PT-UV1-810	4			X	X
	10/2/23	3:40	G	PT-UV2-810	4			X	X
	10/2/23	3:37	G	PT-UV1-810	4			X	X
	10/2/23	4:22	G	PT-UV3-810	4			X	X
	10/2/23	4:22	G	PFOA Field Blank	1				X

RELINQUISHED BY 	DATE / TIME 10/3 1:40 PM	RECEIVED BY Magaly S	DATE / TIME 10-3-23 13:40	SAMPLE CONDITION: Actual Temperature: Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY Magaly S.	DATE / TIME 10-3-23 / 15:13	RECEIVED BY 	DATE / TIME 10/3/23 15:13		
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRE-SCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
 Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
 Weck Laboratories is not responsible for verifying compliance monitoring schedules.

Sample Receipt Checklist

Weck WKO: 3J06122 Date/Time Received: 10/03/23 15:13
 WKO Logged by: Jaime Gomez # of Samples: 06
 Samples Checked by: Jaime Gomez Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature	18.6 °C			
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ice Type (Blue/Wet)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot#
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Amt added

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jaime Gomez

Date: 10/06/23

Work Orders: 3J06123

Report Date: 10/16/2023

Project: COSM 97-005

Received Date: 10/06/2023

Turnaround Time: 5 workdays

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

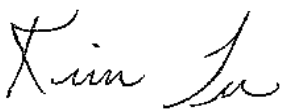
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/06/23 with the Chain-of-Custody document. The samples were received in good condition, at 18.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UVC2-S10D	Client	3J06123-01	Water	10/02/23 01:10	
PT-UV1-S10	Client	3J06123-02	Water	10/02/23 03:35	
PT-UV1-S10D	Client	3J06123-03	Water	10/02/23 03:35	
PT-UV2-S10	Client	3J06123-04	Water	10/02/23 03:40	
PT-UV2-S10D	Client	3J06123-05	Water	10/02/23 03:40	
PT-UVC1-S10	Client	3J06123-06	Water	10/02/23 02:37	
PT-UVC1-S10D	Client	3J06123-07	Water	10/02/23 02:37	
PT-UV3-S10	Client	3J06123-08	Water	10/02/23 04:22	
PT-UV3-S10D	Client	3J06123-09	Water	10/02/23 04:22	
1,4-Dioxane Field Blank	Client	3J06123-10	Water	10/02/23 04:22	
Trip Blank	Client	3J06123-11	Water	10/02/23 04:22	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UVC2-S10D
3J06123-01RE1 (Water) Sampled: 10/02/23 1:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0645		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:16		Analyst: mld	
1,4-Dioxane	22	1.4	3.5	ug/l	50	10/10/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	105%	Conc: 10.5	70-130			10/10/23	

Sample Results

Sample: PT-UV1-S10
3J06123-02 (Water) Sampled: 10/02/23 3:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0645		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:16		Analyst: mld	
1,4-Dioxane	0.073	0.028	0.070	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	96%	Conc: 10.4	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	0.33	0.27	0.50	ug/l	1	10/09/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV1-S10
3J06123-02 (Water) Sampled: 10/02/23 3:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	8.4	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.48	0.27	0.50	ug/l	1	10/09/23	J
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	4.9	0.27	0.50	ug/l	1	10/09/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV1-S10
3J06123-02 (Water) Sampled: 10/02/23 3:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2		Instr: GCMS08					
Batch ID: W3J0660	Preparation: EPA 5030B	Prepared: 10/09/23 08:41					Analyst: ADM
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	4.9		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	100%	Conc: 50.1	70-130	10/09/23
4-Bromofluorobenzene	97%	Conc: 48.4	70-130	10/09/23

Sample Results

(Continued)

Sample: PT-UV1-S10D
3J06123-03 (Water) Sampled: 10/02/23 3:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522		Instr: GCMS20					
Batch ID: W3J0645	Preparation: EPA 522/SPE	Prepared: 10/09/23 08:16					Analyst: mld
1,4-Dioxane	0.080	0.028	0.070	ug/l	1	10/10/23	

Surrogate(s)

1,4-Dioxane-d8	118%	Conc: 12.0	70-130	10/10/23
----------------	------	------------	--------	----------

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV2-S10
3J06123-04 (Water) Sampled: 10/02/23 3:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0645		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:16		Analyst: mld	
1,4-Dioxane	0.057	0.028	0.070	ug/l	1	10/10/23	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	93%	Conc: 9.52	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	5.0	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV2-S10
3J06123-04 (Water) Sampled: 10/02/23 3:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.58	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	3.5	0.27	0.50	ug/l	1	10/09/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	3.5		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV2-S10
3J06123-04 (Water) Sampled: 10/02/23 3:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	95%	Conc: 47.5	70-130			10/09/23	
4-Bromofluorobenzene	95%	Conc: 47.7	70-130			10/09/23	

Sample Results

(Continued)

Sample: PT-UV2-S10D
3J06123-05 (Water) Sampled: 10/02/23 3:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0645

Preparation: EPA 522/SPE

Prepared: 10/09/23 08:16

Analyst: mld

1,4-Dioxane	0.043	0.028	0.070	ug/l	1	10/10/23	J
-------------	-------	-------	-------	------	---	----------	---

Surrogate(s)

1,4-Dioxane-d8	98%	Conc: 9.82	70-130			10/10/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UVC1-S10
3J06123-06 (Water) Sampled: 10/02/23 2:37 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41			Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	0.56	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	2.3	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.63	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	4.9	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UVC1-S10
3J06123-06 (Water) Sampled: 10/02/23 2:37 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	0.28	0.23	0.50	ug/l	1	10/09/23	J
cis-1,2-Dichloroethene	1.2	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	14	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	4.9		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	32	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UVC1-S10
3J06123-06 (Water) Sampled: 10/02/23 2:37 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0660 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:41 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	89%	Conc: 44.4	70-130			10/09/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	91%	Conc: 45.3	70-130			10/09/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UVC1-S10
3J06123-06RE1 (Water) Sampled: 10/02/23 2:37 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0645 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:16 **Analyst:** mld

1,4-Dioxane	23	1.4	3.5	ug/l	50	10/10/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	99%	Conc: 9.90	70-130			10/10/23	
----------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UVC1-S10D
3J06123-07RE1 (Water) Sampled: 10/02/23 2:37 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0645 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:16 **Analyst:** mld

1,4-Dioxane	28	1.4	3.5	ug/l	50	10/10/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	101%	Conc: 10.4	70-130			10/10/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV3-S10
3J06123-08 (Water) Sampled: 10/02/23 4:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0645		Preparation: EPA 522/SPE			Prepared: 10/09/23 08:16		Analyst: mld
1,4-Dioxane	0.12	0.028	0.070	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	121%	Conc: 13.3	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B			Prepared: 10/09/23 08:41		Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	5.9	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV3-S10
3J06123-08 (Water) Sampled: 10/02/23 4:22 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.56	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	4.4	0.27	0.50	ug/l	1	10/09/23	
Chloromethane	0.83	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	4.4		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV3-S10
3J06123-08 (Water) Sampled: 10/02/23 4:22 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0660 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:41 **Analyst:** ADM

trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	91%	Conc: 45.5	70-130			10/09/23	
4-Bromofluorobenzene	93%	Conc: 46.3	70-130			10/09/23	

Sample Results

(Continued)

Sample: PT-UV3-S10D
3J06123-09 (Water) Sampled: 10/02/23 4:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0645 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:16 **Analyst:** mld

1,4-Dioxane	0.073	0.028	0.070	ug/l	1	10/10/23	
-------------	-------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	115%	Conc: 11.3	70-130			10/10/23	
----------------	------	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: 1,4-Dioxane Field Blank
3J06123-10 (Water) Sampled: 10/02/23 4:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0645 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:16 **Analyst:** mld

1,4-Dioxane	0.26	0.028	0.070	ug/l	1	10/10/23	
-------------	------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	117%	Conc: 12.6	70-130			10/10/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank
3J06123-11 (Water) Sampled: 10/02/23 4:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	500	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank
3J06123-11 (Water) Sampled: 10/02/23 4:22 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	ND		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 10/16/2023 15:16

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank
 3J06123-11 (Water) Sampled: 10/02/23 4:22 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	100%	Conc: 49.8	70-130			10/09/23	
4-Bromofluorobenzene	96%	Conc: 47.9	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0645 - EPA 522											
Blank (W3J0645-BLK1)						Prepared & Analyzed: 10/09/23					
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.0			ug/l	10.0		100	70-130			
LCS (W3J0645-BS1)						Prepared & Analyzed: 10/09/23					
1,4-Dioxane	1.90	0.028	0.070	ug/l	2.00		95	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.0			ug/l	10.0		100	70-130			
LCS Dup (W3J0645-BSD1)						Prepared & Analyzed: 10/09/23					
1,4-Dioxane	2.11	0.028	0.070	ug/l	2.00		105	70-130	11	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.5			ug/l	10.0		105	70-130			

Quality Control Results

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0660 - EPA 524.2											
Blank (W3J0660-BLK1)						Prepared & Analyzed: 10/09/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
Blank (W3J0660-BLK1)					Prepared & Analyzed: 10/09/23						
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:16

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
Blank (W3J0660-BLK1)											
Prepared & Analyzed: 10/09/23											
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0		93	70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91	70-130			
LCS (W3J0660-BS1)											
Prepared & Analyzed: 10/09/23											
1,1,1,2-Tetrachloroethane	4.85	0.24	0.50	ug/l	5.00		97	70-130			
1,1,1-Trichloroethane	5.07	0.26	0.50	ug/l	5.00		101	70-130			
1,1,2,2-Tetrachloroethane	5.00	0.20	0.50	ug/l	5.00		100	70-130			
1,1,2-Trichloroethane	4.83	0.19	0.50	ug/l	5.00		97	70-130			
1,1-Dichloroethane	5.27	0.27	0.50	ug/l	5.00		105	70-130			
1,1-Dichloroethene	4.50	0.16	0.50	ug/l	5.00		90	70-130			
1,1-Dichloropropene	4.03	0.14	0.50	ug/l	5.00		81	70-130			
1,2,3-Trichlorobenzene	4.67	0.40	0.50	ug/l	5.00		93	70-130			
1,2,3-Trichloropropane	5.08	0.22	0.50	ug/l	5.00		102	70-130			
1,2,4-Trichlorobenzene	4.51	0.17	0.50	ug/l	5.00		90	70-130			
1,2,4-Trimethylbenzene	4.84	0.20	0.50	ug/l	5.00		97	70-130			
1,2-Dichloroethane	4.70	0.24	0.50	ug/l	5.00		94	70-130			
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00		95	70-130			
1,3,5-Trimethylbenzene	4.77	0.17	0.50	ug/l	5.00		95	70-130			
1,3-Dichloropropane	4.89	0.27	0.50	ug/l	5.00		98	70-130			J
2,2-Dichloropropane	5.28	0.17	0.50	ug/l	5.00		106	70-130			
2-Butanone	5.34	1.5	5.0	ug/l	5.00		107	70-130			
2-Chlorotoluene	5.12	0.15	0.50	ug/l	5.00		102	70-130			
2-Hexanone	4.89	1.2	5.0	ug/l	5.00		98	70-130			J
4-Chlorotoluene	5.06	0.15	0.50	ug/l	5.00		101	70-130			
4-Methyl-2-pentanone	4.70	1.8	5.0	ug/l	5.00		94	70-130			J
Acetone	48.9	3.1	5.0	ug/l	50.0		98	70-130			
Benzene	4.57	0.15	0.50	ug/l	5.00		91	70-130			
Bromobenzene	4.94	0.15	0.50	ug/l	5.00		99	70-130			
Bromochloromethane	4.71	0.15	0.50	ug/l	5.00		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
LCS (W3J0660-BS1)					Prepared & Analyzed: 10/09/23						
Bromodichloromethane	4.87	0.24	0.50	ug/l	5.00		97	70-130			
Bromoform	4.60	0.38	0.50	ug/l	5.00		92	70-130			
Bromomethane	4.57	0.27	0.50	ug/l	5.00		91	70-130			
Carbon Disulfide	4.29	0.25	0.50	ug/l	5.00		86	70-130			
Carbon tetrachloride	4.44	0.27	0.50	ug/l	5.00		89	70-130			
Chlorobenzene	4.62	0.15	0.50	ug/l	5.00		92	70-130			
Chloroethane	4.58	0.17	0.50	ug/l	5.00		92	70-130			
Chloroform	5.20	0.27	0.50	ug/l	5.00		104	70-130			
Chloromethane	5.85	0.23	0.50	ug/l	5.00		117	70-130			
cis-1,2-Dichloroethene	5.15	0.25	0.50	ug/l	5.00		103	70-130			
cis-1,3-Dichloropropene	4.12	0.30	0.50	ug/l	5.00		82	70-130			
Dibromochloromethane	4.72	0.20	0.50	ug/l	5.00		94	70-130			
Dibromomethane	4.86	0.20	0.50	ug/l	5.00		97	70-130			
Dichlorodifluoromethane (Freon 12)	4.69	0.45	0.50	ug/l	5.00		94	70-130			
Di-isopropyl ether	20.9	1.1	2.0	ug/l	20.0		105	70-130			
Ethyl tert-butyl ether	21.1	1.0	2.0	ug/l	20.0		105	70-130			
Ethylbenzene	4.29	0.21	0.50	ug/l	5.00		86	70-130			
Freon 113	4.71	1.5	5.0	ug/l	5.00		94	70-130			J
Hexachlorobutadiene	4.07	0.40	0.50	ug/l	5.00		81	70-130			
Isopropylbenzene	4.30	0.18	0.50	ug/l	5.00		86	70-130			
m,p-Xylene	4.47	0.33	0.50	ug/l	5.00		89	70-130			
m-Dichlorobenzene	5.03	0.14	0.50	ug/l	5.00		101	70-130			
Methyl tert-butyl ether (MTBE)	20.8	0.94	2.0	ug/l	20.0		104	70-130			
Methylene chloride	5.33	0.30	0.50	ug/l	5.00		107	70-130			
Naphthalene	4.52	0.35	0.50	ug/l	5.00		90	70-130			
n-Butylbenzene	4.78	0.29	0.50	ug/l	5.00		96	70-130			
n-Propylbenzene	5.03	0.18	0.50	ug/l	5.00		101	70-130			
o-Dichlorobenzene	5.21	0.19	0.50	ug/l	5.00		104	70-130			
o-Xylene	4.77	0.20	0.50	ug/l	5.00		95	70-130			
p-Dichlorobenzene	5.04	0.18	0.50	ug/l	5.00		101	70-130			
p-Isopropyltoluene	4.78	0.25	0.50	ug/l	5.00		96	70-130			
sec-Butylbenzene	4.73	0.24	0.50	ug/l	5.00		95	70-130			
Styrene	4.61	0.19	0.50	ug/l	5.00		92	70-130			
Tert-amyl methyl ether	21.5	0.59	2.0	ug/l	20.0		107	70-130			
tert-Butylbenzene	4.52	0.18	0.50	ug/l	5.00		90	70-130			
Tetrachloroethene	4.36	0.18	0.50	ug/l	5.00		87	70-130			
Toluene	4.87	0.29	0.50	ug/l	5.00		97	70-130			
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100	70-130			
trans-1,3-Dichloropropene	4.78	0.32	0.50	ug/l	5.00		96	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
LCS (W3J0660-BS1)					Prepared & Analyzed: 10/09/23						
Trichloroethene	4.40	0.18	0.50	ug/l	5.00		88	70-130			
Trichlorofluoromethane	4.70	0.18	0.50	ug/l	5.00		94	70-130			
Vinyl chloride	5.62	0.18	0.50	ug/l	5.00		112	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109	70-130			
4-Bromofluorobenzene	49.6			ug/l	50.0		99	70-130			
LCS Dup (W3J0660-BSD1)					Prepared & Analyzed: 10/09/23						
1,1,1,2-Tetrachloroethane	4.79	0.24	0.50	ug/l	5.00		96	70-130	1	30	
1,1,1-Trichloroethane	4.75	0.26	0.50	ug/l	5.00		95	70-130	6	30	
1,1,2,2-Tetrachloroethane	4.83	0.20	0.50	ug/l	5.00		97	70-130	3	30	
1,1,2-Trichloroethane	4.72	0.19	0.50	ug/l	5.00		94	70-130	2	30	
1,1-Dichloroethane	5.97	0.27	0.50	ug/l	5.00		119	70-130	12	30	
1,1-Dichloroethene	4.58	0.16	0.50	ug/l	5.00		92	70-130	2	30	
1,1-Dichloropropene	3.81	0.14	0.50	ug/l	5.00		76	70-130	5	30	
1,2,3-Trichlorobenzene	4.76	0.40	0.50	ug/l	5.00		95	70-130	2	30	
1,2,3-Trichloropropane	4.93	0.22	0.50	ug/l	5.00		99	70-130	3	30	
1,2,4-Trichlorobenzene	4.62	0.17	0.50	ug/l	5.00		92	70-130	3	30	
1,2,4-Trimethylbenzene	4.58	0.20	0.50	ug/l	5.00		92	70-130	5	30	
1,2-Dichloroethane	4.71	0.24	0.50	ug/l	5.00		94	70-130	0.03	30	
1,2-Dichloropropane	4.51	0.13	0.50	ug/l	5.00		90	70-130	5	30	
1,3,5-Trimethylbenzene	4.53	0.17	0.50	ug/l	5.00		91	70-130	5	30	
1,3-Dichloropropane	4.68	0.27	0.50	ug/l	5.00		94	70-130	4	30	
2,2-Dichloropropane	5.54	0.17	0.50	ug/l	5.00		111	70-130	5	30	
2-Butanone	5.65	1.5	5.0	ug/l	5.00		113	70-130	6	30	
2-Chlorotoluene	4.82	0.15	0.50	ug/l	5.00		96	70-130	6	30	
2-Hexanone	5.01	1.2	5.0	ug/l	5.00		100	70-130	2	30	
4-Chlorotoluene	4.79	0.15	0.50	ug/l	5.00		96	70-130	5	30	
4-Methyl-2-pentanone	4.64	1.8	5.0	ug/l	5.00		93	70-130	1	30	J
Acetone	52.8	3.1	5.0	ug/l	50.0		106	70-130	8	30	
Benzene	4.40	0.15	0.50	ug/l	5.00		88	70-130	4	30	
Bromobenzene	4.72	0.15	0.50	ug/l	5.00		94	70-130	4	30	
Bromochloromethane	5.49	0.15	0.50	ug/l	5.00		110	70-130	15	30	
Bromodichloromethane	4.79	0.24	0.50	ug/l	5.00		96	70-130	2	30	
Bromoform	4.63	0.38	0.50	ug/l	5.00		93	70-130	0.7	30	
Bromomethane	4.71	0.27	0.50	ug/l	5.00		94	70-130	3	30	
Carbon Disulfide	4.37	0.25	0.50	ug/l	5.00		87	70-130	2	30	
Carbon tetrachloride	4.28	0.27	0.50	ug/l	5.00		86	70-130	4	30	
Chlorobenzene	4.73	0.15	0.50	ug/l	5.00		95	70-130	2	30	
Chloroethane	4.64	0.17	0.50	ug/l	5.00		93	70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:16

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
LCS Dup (W3J0660-BSD1)					Prepared & Analyzed: 10/09/23						
Chloroform	5.60	0.27	0.50	ug/l	5.00		112	70-130	7	30	
Chloromethane	5.96	0.23	0.50	ug/l	5.00		119	70-130	2	30	
cis-1,2-Dichloroethene	5.54	0.25	0.50	ug/l	5.00		111	70-130	7	30	
cis-1,3-Dichloropropene	4.18	0.30	0.50	ug/l	5.00		84	70-130	1	30	
Dibromochloromethane	4.72	0.20	0.50	ug/l	5.00		94	70-130	0.05	30	
Dibromomethane	4.81	0.20	0.50	ug/l	5.00		96	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	4.55	0.45	0.50	ug/l	5.00		91	70-130	3	30	
Di-isopropyl ether	24.2	1.1	2.0	ug/l	20.0		121	70-130	14	30	
Ethyl tert-butyl ether	22.2	1.0	2.0	ug/l	20.0		111	70-130	5	30	
Ethylbenzene	4.17	0.21	0.50	ug/l	5.00		83	70-130	3	30	
Freon 113	4.49	1.5	5.0	ug/l	5.00		90	70-130	5	30	J
Hexachlorobutadiene	4.40	0.40	0.50	ug/l	5.00		88	70-130	8	30	
Isopropylbenzene	4.16	0.18	0.50	ug/l	5.00		83	70-130	3	30	
m,p-Xylene	4.34	0.33	0.50	ug/l	5.00		87	70-130	3	30	
m-Dichlorobenzene	4.98	0.14	0.50	ug/l	5.00		100	70-130	0.9	30	
Methyl tert-butyl ether (MTBE)	24.2	0.94	2.0	ug/l	20.0		121	70-130	15	30	
Methylene chloride	5.79	0.30	0.50	ug/l	5.00		116	70-130	8	30	
Naphthalene	4.63	0.35	0.50	ug/l	5.00		93	70-130	2	30	
n-Butylbenzene	4.53	0.29	0.50	ug/l	5.00		91	70-130	5	30	
n-Propylbenzene	4.68	0.18	0.50	ug/l	5.00		94	70-130	7	30	
o-Dichlorobenzene	5.11	0.19	0.50	ug/l	5.00		102	70-130	2	30	
o-Xylene	4.66	0.20	0.50	ug/l	5.00		93	70-130	2	30	
p-Dichlorobenzene	5.03	0.18	0.50	ug/l	5.00		101	70-130	0.04	30	
p-Isopropyltoluene	4.55	0.25	0.50	ug/l	5.00		91	70-130	5	30	
sec-Butylbenzene	4.55	0.24	0.50	ug/l	5.00		91	70-130	4	30	
Styrene	4.49	0.19	0.50	ug/l	5.00		90	70-130	3	30	
Tert-amyl methyl ether	21.1	0.59	2.0	ug/l	20.0		106	70-130	2	30	
tert-Butylbenzene	4.37	0.18	0.50	ug/l	5.00		87	70-130	3	30	
Tetrachloroethene	4.10	0.18	0.50	ug/l	5.00		82	70-130	6	30	
Toluene	4.67	0.29	0.50	ug/l	5.00		93	70-130	4	30	
trans-1,2-Dichloroethene	5.55	0.26	0.50	ug/l	5.00		111	70-130	11	30	
trans-1,3-Dichloropropene	4.72	0.32	0.50	ug/l	5.00		94	70-130	1	30	
Trichloroethene	4.18	0.18	0.50	ug/l	5.00		84	70-130	5	30	
Trichlorofluoromethane	4.47	0.18	0.50	ug/l	5.00		89	70-130	5	30	
Vinyl chloride	5.76	0.18	0.50	ug/l	5.00		115	70-130	2	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109	70-130			
4-Bromofluorobenzene	51.3			ug/l	50.0		103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/16/2023 15:16

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # 3506123

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING															
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: <u>ckindle@BrwnCald.com</u>		<table border="1"> <tr> <td>EPA 522 1,4-dioxane</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>EPA 524.2 VOCs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				EPA 522 1,4-dioxane							EPA 524.2 VOCs							<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input checked="" type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
EPA 522 1,4-dioxane																							
EPA 524.2 VOCs																							
PROJECT MANAGER Chris Kindle		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com						Charges will apply for weekends/holidays															

ID# (For lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP# TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs												
	10/2/23	1:10	G	PT-UV2-SIOD-	2	X													
	10/2/23	3:35	G	PT-UV1-SIO	5	X	X												
	10/2/23	3:35	G	PT-UV1-SIOD-	2	X													
	10/2/23	3:40	G	PT-UV2-SIO	5	X	X												
	10/2/23	3:40	G	PT-UV2-SIOD-	2	X													
	10/2/23	2:37	G	PT-UV1-SIO-	5	X	X												
	10/2/23	2:37	G	PT-UV1-SIOD-	2	X													
	10/2/23	4:22	G	PT-UV3-SIO	5	X	X												
	10/2/23	4:22	G	PT-UV3-SIOD-	2	X													
	10/2/23	4:22	G	1,4-Dioxane Field Blank	2	X													
	10/2/23	4:22	G	Trip Blank	1		X												

RELINQUISHED BY 	DATE / TIME 10/3 1:40pm	RECEIVED BY Magaly S 10-3-23 13:40	SAMPLE CONDITION: Actual Temperature: 18.6° Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab 	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY Magaly S	DATE / TIME 10.3.23/15:12	RECEIVED BY 10/3/23 15:12		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.

DOC version 04132015



Sample Receipt Checklist

Week WKO: **3J06123**

Date/Time Received: **10/03/23 15:12**

WKO Logged by: **Jaime Gomez**

of Samples: **11**

Samples Checked by: **Jaime Gomez**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature	18.6 °C			
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading: Acid Lot#
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Amt added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: **10/06/23**

Work Orders: 3J06125

Report Date: 10/16/2023

Project: COSM 97-005

Received Date: 10/03/2023

Turnaround Time: 5 workdays

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/03/23 with the Chain-of-Custody document. The samples were received in good condition, at 18.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
S9-UV1D	Client	3J06125-01	Water	10/02/23 15:35	
S9-UV1	Client	3J06125-02	Water	10/02/23 15:35	
S9-UVC1	Client	3J06125-03	Water	10/02/23 14:37	
S9-UV-C1D	Client	3J06125-04	Water	10/02/23 14:37	
S9-UV-C2D	Client	3J06125-05	Water	10/02/23 13:10	
S9-UV-C2	Client	3J06125-06	Water	10/02/23 13:10	
UV-S9-C2	Client	3J06125-07	Water	10/02/23 13:10	
S9-UV2	Client	3J06125-08	Water	10/02/23 15:40	
S9-UV2D	Client	3J06125-09	Water	10/02/23 15:40	
S9-UV3	Client	3J06125-10	Water	10/02/23 16:22	
S9-UV3D	Client	3J06125-11	Water	10/02/23 16:22	
PT-UVC2-S10	Client	3J06125-12	Water	10/02/23 09:10	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

Sample: S9-UV1D
3J06125-01RE1 (Water) Sampled: 10/02/23 15:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0645		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:16		Analyst: mld	
1,4-Dioxane	260	2.8	7.0	ug/l	100	10/10/23	M-06
Surrogate(s)							
1,4-Dioxane-d8	100%	Conc: 9.81	70-130			10/10/23	

Sample Results

Sample: S9-UV1
3J06125-02 (Water) Sampled: 10/02/23 15:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	0.58	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	3.1	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UV1
3J06125-02 (Water) Sampled: 10/02/23 15:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.56	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	5.4	0.27	0.50	ug/l	1	10/09/23	
Chloromethane	1.0	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	1.2	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UV1
3J06125-02 (Water) Sampled: 10/02/23 15:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2	Instr: GCMS08
Batch ID: W3J0660	Preparation: EPA 5030B
Prepared: 10/09/23 08:41	Analyst: ADM
Tert-amyl methyl ether	ND 0.59 2.0 ug/l 1 10/09/23
tert-Butylbenzene	ND 0.18 0.50 ug/l 1 10/09/23
Tetrachloroethene	14 0.18 0.50 ug/l 1 10/09/23
THMs, Total	5.4 0.50 ug/l 1 10/09/23
Toluene	ND 0.29 0.50 ug/l 1 10/09/23
trans-1,2-Dichloroethene	ND 0.26 0.50 ug/l 1 10/09/23
trans-1,3-Dichloropropene	ND 0.32 0.50 ug/l 1 10/09/23
Trichloroethene	31 0.18 0.50 ug/l 1 10/09/23
Trichlorofluoromethane	ND 0.18 0.50 ug/l 1 10/09/23
Vinyl chloride	ND 0.18 0.50 ug/l 1 10/09/23
Xylenes, Total	ND 0.33 0.50 ug/l 1 10/09/23

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 46.0	70-130	10/09/23
4-Bromofluorobenzene	91%	Conc: 45.5	70-130	10/09/23

Sample Results

(Continued)

Sample: S9-UV1
3J06125-02RE1 (Water) Sampled: 10/02/23 15:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522	Instr: GCMS20
Batch ID: W3J0648	Preparation: EPA 522/SPE
Prepared: 10/09/23 08:20	Analyst: mld
1,4-Dioxane	340 2.8 7.0 ug/l 100 10/10/23 M-06

Surrogate(s)

1,4-Dioxane-d8	99%	Conc: 9.87	70-130	10/10/23
----------------	-----	------------	--------	----------

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UVC1
3J06125-03 (Water) Sampled: 10/02/23 14:37 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	0.55	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	3.2	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.62	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	5.0	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UVC1
3J06125-03 (Water) Sampled: 10/02/23 14:37 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	1.2	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	14	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	5.0		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	32	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UVC1
3J06125-03 (Water) Sampled: 10/02/23 14:37 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	95%	Conc: 47.5	70-130			10/09/23	
4-Bromofluorobenzene	92%	Conc: 46.1	70-130			10/09/23	

Sample Results

(Continued)

Sample: S9-UVC1
3J06125-03RE1 (Water) Sampled: 10/02/23 14:37 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 522 Instr: GCMS20							
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	27	1.4	3.5	ug/l	50	10/10/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	104%	Conc: 11.3	70-130			10/10/23	

Sample Results

(Continued)

Sample: S9-UV-C1D
3J06125-04RE1 (Water) Sampled: 10/02/23 14:37 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 522 Instr: GCMS20							
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	19	1.4	3.5	ug/l	50	10/10/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	94%	Conc: 9.32	70-130			10/10/23	

Sample Results

(Continued)

Sample: S9-UV-C2D
3J06125-05RE1 (Water) Sampled: 10/02/23 13:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 522 Instr: GCMS20							
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	24	1.4	3.5	ug/l	50	10/10/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	84%	Conc: 8.67	70-130			10/10/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:14

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: S9-UV-C2
 3J06125-06RE1 (Water) Sampled: 10/02/23 13:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	23	1.4	3.5	ug/l	50	10/10/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	80%	Conc: 8.40	70-130			10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: UV-S9-C2
3J06125-07 (Water) Sampled: 10/02/23 13:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	0.59	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	2.7	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.69	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	5.2	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: UV-S9-C2
3J06125-07 (Water) Sampled: 10/02/23 13:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	1.2	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	13	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	5.2		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	34	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: UV-S9-C2
 3J06125-07 (Water) Sampled: 10/02/23 13:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0660

Preparation: EPA 5030B

Prepared: 10/09/23 08:41

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 43.8	70-130			10/09/23	
4-Bromofluorobenzene	90%	Conc: 44.9	70-130			10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UV2
3J06125-08 (Water) Sampled: 10/02/23 15:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	0.52	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	2.9	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.58	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	4.7	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UV2
3J06125-08 (Water) Sampled: 10/02/23 15:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	0.27	0.23	0.50	ug/l	1	10/09/23	J
cis-1,2-Dichloroethene	1.1	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	14	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	4.7		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	31	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	10/09/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UV2
3J06125-08 (Water) Sampled: 10/02/23 15:40 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0660 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:41 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 46.2	70-130			10/09/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	91%	Conc: 45.3	70-130			10/09/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: S9-UV2
3J06125-08RE1 (Water) Sampled: 10/02/23 15:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0648 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:20 **Analyst:** mld

1,4-Dioxane	280	2.8	7.0	ug/l	100	10/10/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	95%	Conc: 10.1	70-130			10/10/23	
----------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: S9-UV2D
3J06125-09RE1 (Water) Sampled: 10/02/23 15:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0648 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:20 **Analyst:** mld

1,4-Dioxane	280	2.8	7.0	ug/l	100	10/10/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	90%	Conc: 9.40	70-130			10/10/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UV3
3J06125-10 (Water) Sampled: 10/02/23 16:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	0.53	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	3.0	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	3.4	3.1	5.0	ug/l	1	10/09/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.53	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	4.8	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UV3
3J06125-10 (Water) Sampled: 10/02/23 16:22 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	1.1	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	13	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	4.8		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	30	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	0.88	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: S9-UV3
3J06125-10 (Water) Sampled: 10/02/23 16:22 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0660 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:41 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	93%	Conc: 46.6	70-130			10/09/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	91%	Conc: 45.6	70-130			10/09/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: S9-UV3
3J06125-10RE1 (Water) Sampled: 10/02/23 16:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0648 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:20 **Analyst:** mld

1,4-Dioxane	290	2.8	7.0	ug/l	100	10/10/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	84%	Conc: 8.47	70-130			10/10/23	
----------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: S9-UV3D
3J06125-11RE1 (Water) Sampled: 10/02/23 16:22 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0648 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:20 **Analyst:** mld

1,4-Dioxane	300	2.8	7.0	ug/l	100	10/10/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	94%	Conc: 9.45	70-130			10/10/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UVC2-S10
3J06125-12 (Water) Sampled: 10/02/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/09/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/09/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/09/23	
1,1-Dichloroethane	0.69	0.27	0.50	ug/l	1	10/09/23	
1,1-Dichloroethene	1.9	0.16	0.50	ug/l	1	10/09/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/09/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/09/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/09/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/09/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/09/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/09/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/09/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/09/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/09/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/09/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/09/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/09/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/09/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/09/23	
Acetone	ND	3.1	5.0	ug/l	1	10/09/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/09/23	
Benzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/09/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/09/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/09/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/09/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/09/23	
Carbon tetrachloride	0.70	0.27	0.50	ug/l	1	10/09/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/09/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/09/23	
Chloroform	5.8	0.27	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UVC2-S10
3J06125-12 (Water) Sampled: 10/02/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0660		Preparation: EPA 5030B		Prepared: 10/09/23 08:41		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/09/23	
cis-1,2-Dichloroethene	0.85	0.25	0.50	ug/l	1	10/09/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/09/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/09/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/09/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/09/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/09/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/09/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/09/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/09/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/09/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/09/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/09/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/09/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/09/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/09/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/09/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/09/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/09/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/09/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/09/23	
Styrene	ND	0.19	0.50	ug/l	1	10/09/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/09/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/09/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/09/23	
THMs, Total	5.8		0.50	ug/l	1	10/09/23	
Toluene	ND	0.29	0.50	ug/l	1	10/09/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/09/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/09/23	
Trichloroethene	15	0.18	0.50	ug/l	1	10/09/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/09/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/09/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UVC2-S10
 3J06125-12 (Water) Sampled: 10/02/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0660 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:41 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/09/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	98%	Conc: 48.9	70-130			10/09/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	96%	Conc: 48.0	70-130			10/09/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UVC2-S10
 3J06125-12RE1 (Water) Sampled: 10/02/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0648 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:20 **Analyst:** mld

1,4-Dioxane	22	1.4	3.5	ug/l	50	10/10/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	84%	Conc: 8.43	70-130			10/10/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:14

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0645 - EPA 522											
Blank (W3J0645-BLK1)					Prepared & Analyzed: 10/09/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.0			ug/l	10.0		100	70-130			
LCS (W3J0645-BS1)					Prepared & Analyzed: 10/09/23						
1,4-Dioxane	1.90	0.028	0.070	ug/l	2.00		95	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.0			ug/l	10.0		100	70-130			
LCS Dup (W3J0645-BSD1)					Prepared & Analyzed: 10/09/23						
1,4-Dioxane	2.11	0.028	0.070	ug/l	2.00		105	70-130	11	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.5			ug/l	10.0		105	70-130			
Batch: W3J0648 - EPA 522											
Blank (W3J0648-BLK1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.9			ug/l	10.0		109	70-130			
LCS (W3J0648-BS1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,4-Dioxane	0.0598	0.028	0.070	ug/l	0.0600		100	70-130			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.4			ug/l	10.0		104	70-130			
LCS Dup (W3J0648-BSD1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,4-Dioxane	0.0761	0.028	0.070	ug/l	0.0600		127	70-130	24	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.4			ug/l	10.0		104	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC		RPD		Qualifier
							Limits	RPD	Limit		
Batch: W3J0660 - EPA 524.2											
Blank (W3J0660-BLK1)						Prepared & Analyzed: 10/09/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
Blank (W3J0660-BLK1)						Prepared & Analyzed: 10/09/23					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0		93	70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91	70-130			
LCS (W3J0660-BS1)						Prepared & Analyzed: 10/09/23					
1,1,1,2-Tetrachloroethane	4.85	0.24	0.50	ug/l	5.00		97	70-130			
1,1,1-Trichloroethane	5.07	0.26	0.50	ug/l	5.00		101	70-130			
1,1,2,2-Tetrachloroethane	5.00	0.20	0.50	ug/l	5.00		100	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier	
Batch: W3J0660 - EPA 524.2 (Continued)					Prepared & Analyzed: 10/09/23						
LCS (W3J0660-BS1)											
1,1,2-Trichloroethane	4.83	0.19	0.50	ug/l	5.00		97 70-130				
1,1-Dichloroethane	5.27	0.27	0.50	ug/l	5.00		105 70-130				
1,1-Dichloroethene	4.50	0.16	0.50	ug/l	5.00		90 70-130				
1,1-Dichloropropene	4.03	0.14	0.50	ug/l	5.00		81 70-130				
1,2,3-Trichlorobenzene	4.67	0.40	0.50	ug/l	5.00		93 70-130				
1,2,3-Trichloropropane	5.08	0.22	0.50	ug/l	5.00		102 70-130				
1,2,4-Trichlorobenzene	4.51	0.17	0.50	ug/l	5.00		90 70-130				
1,2,4-Trimethylbenzene	4.84	0.20	0.50	ug/l	5.00		97 70-130				
1,2-Dichloroethane	4.70	0.24	0.50	ug/l	5.00		94 70-130				
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00		95 70-130				
1,3,5-Trimethylbenzene	4.77	0.17	0.50	ug/l	5.00		95 70-130				
1,3-Dichloropropane	4.89	0.27	0.50	ug/l	5.00		98 70-130			J	
2,2-Dichloropropane	5.28	0.17	0.50	ug/l	5.00		106 70-130				
2-Butanone	5.34	1.5	5.0	ug/l	5.00		107 70-130				
2-Chlorotoluene	5.12	0.15	0.50	ug/l	5.00		102 70-130				
2-Hexanone	4.89	1.2	5.0	ug/l	5.00		98 70-130			J	
4-Chlorotoluene	5.06	0.15	0.50	ug/l	5.00		101 70-130				
4-Methyl-2-pentanone	4.70	1.8	5.0	ug/l	5.00		94 70-130			J	
Acetone	48.9	3.1	5.0	ug/l	50.0		98 70-130				
Benzene	4.57	0.15	0.50	ug/l	5.00		91 70-130				
Bromobenzene	4.94	0.15	0.50	ug/l	5.00		99 70-130				
Bromochloromethane	4.71	0.15	0.50	ug/l	5.00		94 70-130				
Bromodichloromethane	4.87	0.24	0.50	ug/l	5.00		97 70-130				
Bromoform	4.60	0.38	0.50	ug/l	5.00		92 70-130				
Bromomethane	4.57	0.27	0.50	ug/l	5.00		91 70-130				
Carbon Disulfide	4.29	0.25	0.50	ug/l	5.00		86 70-130				
Carbon tetrachloride	4.44	0.27	0.50	ug/l	5.00		89 70-130				
Chlorobenzene	4.62	0.15	0.50	ug/l	5.00		92 70-130				
Chloroethane	4.58	0.17	0.50	ug/l	5.00		92 70-130				
Chloroform	5.20	0.27	0.50	ug/l	5.00		104 70-130				
Chloromethane	5.85	0.23	0.50	ug/l	5.00		117 70-130				
cis-1,2-Dichloroethene	5.15	0.25	0.50	ug/l	5.00		103 70-130				
cis-1,3-Dichloropropene	4.12	0.30	0.50	ug/l	5.00		82 70-130				
Dibromochloromethane	4.72	0.20	0.50	ug/l	5.00		94 70-130				
Dibromomethane	4.86	0.20	0.50	ug/l	5.00		97 70-130				
Dichlorodifluoromethane (Freon 12)	4.69	0.45	0.50	ug/l	5.00		94 70-130				
Di-isopropyl ether	20.9	1.1	2.0	ug/l	20.0		105 70-130				
Ethyl tert-butyl ether	21.1	1.0	2.0	ug/l	20.0		105 70-130				
Ethylbenzene	4.29	0.21	0.50	ug/l	5.00		86 70-130				

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)										
LCS (W3J0660-BS1)					Prepared & Analyzed: 10/09/23					
Freon 113	4.71	1.5	5.0	ug/l	5.00		94 70-130			J
Hexachlorobutadiene	4.07	0.40	0.50	ug/l	5.00		81 70-130			
Isopropylbenzene	4.30	0.18	0.50	ug/l	5.00		86 70-130			
m,p-Xylene	4.47	0.33	0.50	ug/l	5.00		89 70-130			
m-Dichlorobenzene	5.03	0.14	0.50	ug/l	5.00		101 70-130			
Methyl tert-butyl ether (MTBE)	20.8	0.94	2.0	ug/l	20.0		104 70-130			
Methylene chloride	5.33	0.30	0.50	ug/l	5.00		107 70-130			
Naphthalene	4.52	0.35	0.50	ug/l	5.00		90 70-130			
n-Butylbenzene	4.78	0.29	0.50	ug/l	5.00		96 70-130			
n-Propylbenzene	5.03	0.18	0.50	ug/l	5.00		101 70-130			
o-Dichlorobenzene	5.21	0.19	0.50	ug/l	5.00		104 70-130			
o-Xylene	4.77	0.20	0.50	ug/l	5.00		95 70-130			
p-Dichlorobenzene	5.04	0.18	0.50	ug/l	5.00		101 70-130			
p-Isopropyltoluene	4.78	0.25	0.50	ug/l	5.00		96 70-130			
sec-Butylbenzene	4.73	0.24	0.50	ug/l	5.00		95 70-130			
Styrene	4.61	0.19	0.50	ug/l	5.00		92 70-130			
Tert-amyl methyl ether	21.5	0.59	2.0	ug/l	20.0		107 70-130			
tert-Butylbenzene	4.52	0.18	0.50	ug/l	5.00		90 70-130			
Tetrachloroethene	4.36	0.18	0.50	ug/l	5.00		87 70-130			
Toluene	4.87	0.29	0.50	ug/l	5.00		97 70-130			
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100 70-130			
trans-1,3-Dichloropropene	4.78	0.32	0.50	ug/l	5.00		96 70-130			
Trichloroethene	4.40	0.18	0.50	ug/l	5.00		88 70-130			
Trichlorofluoromethane	4.70	0.18	0.50	ug/l	5.00		94 70-130			
Vinyl chloride	5.62	0.18	0.50	ug/l	5.00		112 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109 70-130			
4-Bromofluorobenzene	49.6			ug/l	50.0		99 70-130			
LCS Dup (W3J0660-BSD1)					Prepared & Analyzed: 10/09/23					
1,1,1,2-Tetrachloroethane	4.79	0.24	0.50	ug/l	5.00		96 70-130	1	30	
1,1,1-Trichloroethane	4.75	0.26	0.50	ug/l	5.00		95 70-130	6	30	
1,1,2,2-Tetrachloroethane	4.83	0.20	0.50	ug/l	5.00		97 70-130	3	30	
1,1,2-Trichloroethane	4.72	0.19	0.50	ug/l	5.00		94 70-130	2	30	
1,1-Dichloroethane	5.97	0.27	0.50	ug/l	5.00		119 70-130	12	30	
1,1-Dichloroethene	4.58	0.16	0.50	ug/l	5.00		92 70-130	2	30	
1,1-Dichloropropene	3.81	0.14	0.50	ug/l	5.00		76 70-130	5	30	
1,2,3-Trichlorobenzene	4.76	0.40	0.50	ug/l	5.00		95 70-130	2	30	
1,2,3-Trichloropropane	4.93	0.22	0.50	ug/l	5.00		99 70-130	3	30	
1,2,4-Trichlorobenzene	4.62	0.17	0.50	ug/l	5.00		92 70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
LCS Dup (W3J0660-BSD1)					Prepared & Analyzed: 10/09/23						
1,2,4-Trimethylbenzene	4.58	0.20	0.50	ug/l	5.00		92	70-130	5	30	
1,2-Dichloroethane	4.71	0.24	0.50	ug/l	5.00		94	70-130	0.03	30	
1,2-Dichloropropane	4.51	0.13	0.50	ug/l	5.00		90	70-130	5	30	
1,3,5-Trimethylbenzene	4.53	0.17	0.50	ug/l	5.00		91	70-130	5	30	
1,3-Dichloropropane	4.68	0.27	0.50	ug/l	5.00		94	70-130	4	30	
2,2-Dichloropropane	5.54	0.17	0.50	ug/l	5.00		111	70-130	5	30	
2-Butanone	5.65	1.5	5.0	ug/l	5.00		113	70-130	6	30	
2-Chlorotoluene	4.82	0.15	0.50	ug/l	5.00		96	70-130	6	30	
2-Hexanone	5.01	1.2	5.0	ug/l	5.00		100	70-130	2	30	
4-Chlorotoluene	4.79	0.15	0.50	ug/l	5.00		96	70-130	5	30	
4-Methyl-2-pentanone	4.64	1.8	5.0	ug/l	5.00		93	70-130	1	30	J
Acetone	52.8	3.1	5.0	ug/l	50.0		106	70-130	8	30	
Benzene	4.40	0.15	0.50	ug/l	5.00		88	70-130	4	30	
Bromobenzene	4.72	0.15	0.50	ug/l	5.00		94	70-130	4	30	
Bromochloromethane	5.49	0.15	0.50	ug/l	5.00		110	70-130	15	30	
Bromodichloromethane	4.79	0.24	0.50	ug/l	5.00		96	70-130	2	30	
Bromoform	4.63	0.38	0.50	ug/l	5.00		93	70-130	0.7	30	
Bromomethane	4.71	0.27	0.50	ug/l	5.00		94	70-130	3	30	
Carbon Disulfide	4.37	0.25	0.50	ug/l	5.00		87	70-130	2	30	
Carbon tetrachloride	4.28	0.27	0.50	ug/l	5.00		86	70-130	4	30	
Chlorobenzene	4.73	0.15	0.50	ug/l	5.00		95	70-130	2	30	
Chloroethane	4.64	0.17	0.50	ug/l	5.00		93	70-130	1	30	
Chloroform	5.60	0.27	0.50	ug/l	5.00		112	70-130	7	30	
Chloromethane	5.96	0.23	0.50	ug/l	5.00		119	70-130	2	30	
cis-1,2-Dichloroethene	5.54	0.25	0.50	ug/l	5.00		111	70-130	7	30	
cis-1,3-Dichloropropene	4.18	0.30	0.50	ug/l	5.00		84	70-130	1	30	
Dibromochloromethane	4.72	0.20	0.50	ug/l	5.00		94	70-130	0.05	30	
Dibromomethane	4.81	0.20	0.50	ug/l	5.00		96	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	4.55	0.45	0.50	ug/l	5.00		91	70-130	3	30	
Di-isopropyl ether	24.2	1.1	2.0	ug/l	20.0		121	70-130	14	30	
Ethyl tert-butyl ether	22.2	1.0	2.0	ug/l	20.0		111	70-130	5	30	
Ethylbenzene	4.17	0.21	0.50	ug/l	5.00		83	70-130	3	30	
Freon 113	4.49	1.5	5.0	ug/l	5.00		90	70-130	5	30	J
Hexachlorobutadiene	4.40	0.40	0.50	ug/l	5.00		88	70-130	8	30	
Isopropylbenzene	4.16	0.18	0.50	ug/l	5.00		83	70-130	3	30	
m,p-Xylene	4.34	0.33	0.50	ug/l	5.00		87	70-130	3	30	
m-Dichlorobenzene	4.98	0.14	0.50	ug/l	5.00		100	70-130	0.9	30	
Methyl tert-butyl ether (MTBE)	24.2	0.94	2.0	ug/l	20.0		121	70-130	15	30	
Methylene chloride	5.79	0.30	0.50	ug/l	5.00		116	70-130	8	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 10/16/2023 15:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0660 - EPA 524.2 (Continued)											
LCS Dup (W3J0660-BSD1)					Prepared & Analyzed: 10/09/23						
Naphthalene	4.63	0.35	0.50	ug/l	5.00		93	70-130	2	30	
n-Butylbenzene	4.53	0.29	0.50	ug/l	5.00		91	70-130	5	30	
n-Propylbenzene	4.68	0.18	0.50	ug/l	5.00		94	70-130	7	30	
o-Dichlorobenzene	5.11	0.19	0.50	ug/l	5.00		102	70-130	2	30	
o-Xylene	4.66	0.20	0.50	ug/l	5.00		93	70-130	2	30	
p-Dichlorobenzene	5.03	0.18	0.50	ug/l	5.00		101	70-130	0.04	30	
p-Isopropyltoluene	4.55	0.25	0.50	ug/l	5.00		91	70-130	5	30	
sec-Butylbenzene	4.55	0.24	0.50	ug/l	5.00		91	70-130	4	30	
Styrene	4.49	0.19	0.50	ug/l	5.00		90	70-130	3	30	
Tert-amyl methyl ether	21.1	0.59	2.0	ug/l	20.0		106	70-130	2	30	
tert-Butylbenzene	4.37	0.18	0.50	ug/l	5.00		87	70-130	3	30	
Tetrachloroethene	4.10	0.18	0.50	ug/l	5.00		82	70-130	6	30	
Toluene	4.67	0.29	0.50	ug/l	5.00		93	70-130	4	30	
trans-1,2-Dichloroethene	5.55	0.26	0.50	ug/l	5.00		111	70-130	11	30	
trans-1,3-Dichloropropene	4.72	0.32	0.50	ug/l	5.00		94	70-130	1	30	
Trichloroethene	4.18	0.18	0.50	ug/l	5.00		84	70-130	5	30	
Trichlorofluoromethane	4.47	0.18	0.50	ug/l	5.00		89	70-130	5	30	
Vinyl chloride	5.76	0.18	0.50	ug/l	5.00		115	70-130	2	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109	70-130			
4-Bromofluorobenzene	51.3			ug/l	50.0		103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/16/2023 15:14

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3506125**

Page **1** Of **1**

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED								SPECIAL HANDLING																					
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		<table border="1"> <tr> <td>EPA 522 1,4-dioxane</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>EPA 524.2 VOCs</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>								EPA 522 1,4-dioxane										EPA 524.2 VOCs										U R G E N T Same Day Rush 150% 24 Hour Rush 100% 48-72 Hour Rush 75% 4 - 5 Day Rush 30% Rush Extractions 50% 10 - 15 Business Days QA/QC Data Package	
EPA 522 1,4-dioxane																																	
EPA 524.2 VOCs																																	
PROJECT MANAGER Chris Kindle		invoice to Rose Ford. Rford@BrwnCald.com SAMPLER																															

Charges will apply for weekends/holidays

Method of Shipment:

COMMENTS

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs											
	10/2/23	15:35	G	S9-UV1D	2	X												
	10/2/23	15:35	G	S9-UV1	5	X	X											
	10/2/23	14:37	G	S9-UV-C1	5	X	X											
	10/2/23	14:37	G	S9-UV-C1D	2	X												
	10/2/23	13:10	G	S9-UV-C2D	2	X												
	10/2/23	13:10	G	S9-UV-C2	2	X												
	10/2/23	13:10	G	UV-S9-C2	3		X											
	10/2/23	15:40	G	S9-UV2	5	X	X											
	10/2/23	15:40	G	S9-UV2D	2	X												
	10/2/23	16:22	G	S9-UV3	5	X	X											
	10/2/23	16:22	G	S9-UV3D	2	X												
	10/2/23	16:10		PT-UVCL-810	5	X	X											

RELINQUISHED BY 	DATE / TIME 10/3 1:40pm	RECEIVED BY Magaly S. 10-3-23 13:40	SAMPLE CONDITION: Actual Temperature: 18.6 Received On Ice Preserved <input checked="" type="checkbox"/> Y / N Evidence Seals Present <input checked="" type="checkbox"/> Y / N Container Attacked <input checked="" type="checkbox"/> Y / N Preserved at Lab <input checked="" type="checkbox"/> Y / N	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous Sl. = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY Magaly S	DATE / TIME 10-3-23 / 15:13	RECEIVED BY 10/3/23 15:13		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: 3106125

Date/Time Received: 10/03/23 15:13

WKO Logged by: Jaime Gomez

of Samples: 12

Samples Checked by: Jaime Gomez

Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		18.6 °C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper lot# 3082367
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cl Test Strip Lot# 11032201
O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading?
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Ampl. added

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jaime Gomez

Date: 10/06/23

Work Orders: 3J06133

Report Date: 11/20/2023

Project: COSM 97-005

Received Date: 10/4/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/04/23 with the Chain-of-Custody document. The samples were received in good condition, at 5.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:35

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV17-S10	Client	3J06133-01	Water	10/03/23 14:53	
PT-UV16-S10	Client	3J06133-02	Water	10/03/23 14:30	
PT-UV5-S10	Client	3J06133-03	Water	10/03/23 11:30	
PT-UV6-S10	Client	3J06133-04	Water	10/03/23 14:04	
PT-UV4-S10	Client	3J06133-05	Water	10/03/23 10:45	
PT-UV4-S10D	Client	3J06133-06	Water	10/03/23 10:45	
Field Blank	Client	3J06133-07	Water	10/03/23 16:09	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFUnA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:35

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV17-S10
3J06133-01 (Water) Sampled: 10/03/23 14:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12
Batch ID: W3J0656	Preparation: EPA 5030B
Prepared: 10/09/23 08:36	Analyst: ADM
1,2,3-Trichloropropane	0.013

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06					
Batch ID: W3J1268	Preparation: EPA 537/SPE					
Prepared: 10/15/23 08:11	Analyst: jna					
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/18/23
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/18/23
ADONA	ND	0.55	2.0	ng/l	1	10/18/23
EtFOSAA	ND	0.48	2.0	ng/l	1	10/18/23
HFPO-DA	ND	0.87	2.0	ng/l	1	10/18/23
MeFOSAA	ND	0.58	2.0	ng/l	1	10/18/23
PFBS	2.9	0.58	2.0	ng/l	1	10/18/23
PFDA	ND	0.45	2.0	ng/l	1	10/18/23
PFDoA	ND	0.66	2.0	ng/l	1	10/18/23
PFHpA	1.2	0.53	2.0	ng/l	1	10/18/23
PFHxA	5.2	0.49	2.0	ng/l	1	10/18/23
PFHxS	2.6	0.59	2.0	ng/l	1	10/18/23
PFNA	ND	0.52	2.0	ng/l	1	10/18/23
PFOA	2.2	0.67	2.0	ng/l	1	10/18/23
PFOS	ND	0.53	2.0	ng/l	1	10/18/23
PFTeDA	ND	0.45	2.0	ng/l	1	10/18/23
PFTTrDA	ND	0.42	2.0	ng/l	1	10/18/23
PFUnA	ND	0.48	2.0	ng/l	1	10/18/23

Surrogate(s)

13C2-PFDA	98%	Conc: 36.0	70-130	10/18/23
13C2-PFHxA	95%	Conc: 34.8	70-130	10/18/23
d5-EtFOSAA	112%	Conc: 164	70-130	10/18/23
HFPO-DA-13C3	94%	Conc: 34.5	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:35

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV16-S10
3J06133-02 (Water) Sampled: 10/03/23 14:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0656	Preparation: EPA 5030B			Prepared: 10/09/23 08:36	Analyst: ADM		
1,2,3-Trichloropropane	0.014	0.0012	0.0050	ug/l	1	10/11/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1268	Preparation: EPA 537/SPE			Prepared: 10/15/23 08:11	Analyst: jna		
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/18/23	
ADONA	ND	0.48	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.76	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/18/23	
PFBS	2.9	0.50	1.7	ng/l	1	10/18/23	
PFDA	ND	0.40	1.7	ng/l	1	10/18/23	
PFDoA	ND	0.57	1.7	ng/l	1	10/18/23	
PFHpA	1.2	0.47	1.7	ng/l	1	10/18/23	J
PFHxA	5.4	0.43	1.7	ng/l	1	10/18/23	
PFHxS	2.7	0.52	1.7	ng/l	1	10/18/23	
PFNA	ND	0.45	1.7	ng/l	1	10/18/23	
PFOA	2.2	0.58	1.7	ng/l	1	10/18/23	
PFOS	ND	0.46	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.40	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.42	1.7	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	103%	Conc: 36.2	70-130	10/18/23
13C2-PFHxA	102%	Conc: 35.7	70-130	10/18/23
d5-EtFOSAA	109%	Conc: 153	70-130	10/18/23
HFPO-DA-13C3	100%	Conc: 35.0	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:35

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV5-S10
3J06133-03 (Water) Sampled: 10/03/23 11:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12						
Batch ID: W3J0656	Preparation: EPA 5030B						
Prepared: 10/09/23 08:36	Analyst: ADM						
1,2,3-Trichloropropane	0.010	0.0012	0.0050	ug/l	1	10/11/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06						
Batch ID: W3J1268	Preparation: EPA 537/SPE						
Prepared: 10/15/23 08:11	Analyst: jna						
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/18/23	
ADONA	ND	0.49	1.8	ng/l	1	10/18/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/18/23	
HFPO-DA	ND	0.78	1.8	ng/l	1	10/18/23	
MeFOSAA	ND	0.52	1.8	ng/l	1	10/18/23	
PFBS	2.9	0.52	1.8	ng/l	1	10/18/23	
PFDA	ND	0.41	1.8	ng/l	1	10/18/23	
PFDoA	ND	0.59	1.8	ng/l	1	10/18/23	
PFHpA	1.1	0.48	1.8	ng/l	1	10/18/23	J
PFHxA	5.2	0.44	1.8	ng/l	1	10/18/23	
PFHxS	2.7	0.53	1.8	ng/l	1	10/18/23	
PFNA	ND	0.47	1.8	ng/l	1	10/18/23	
PFOA	2.2	0.60	1.8	ng/l	1	10/18/23	
PFOS	ND	0.48	1.8	ng/l	1	10/18/23	
PFTeDA	ND	0.41	1.8	ng/l	1	10/18/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/18/23	
PFUnA	ND	0.43	1.8	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	94%	Conc: 33.8	70-130	10/18/23
13C2-PFHxA	98%	Conc: 35.0	70-130	10/18/23
d5-EtFOSAA	108%	Conc: 155	70-130	10/18/23
HFPO-DA-13C3	97%	Conc: 34.7	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV6-S10
3J06133-04 (Water) Sampled: 10/03/23 14:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12	
Batch ID: W3J0656	Preparation: EPA 5030B	Prepared: 10/09/23 08:36	Analyst: ADM
1,2,3-Trichloropropane	0.011	0.0012	0.0050 ug/l

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06	
Batch ID: W3J1268	Preparation: EPA 537/SPE	Prepared: 10/15/23 08:11	Analyst: jna
11CI-PF3OUdS	ND	0.56	2.0 ng/l
9CI-PF3ONS	ND	0.53	2.0 ng/l
ADONA	ND	0.55	2.0 ng/l
EtFOSAA	ND	0.48	2.0 ng/l
HFPO-DA	ND	0.87	2.0 ng/l
MeFOSAA	ND	0.58	2.0 ng/l
PFBS	3.0	0.58	2.0 ng/l
PFDA	ND	0.45	2.0 ng/l
PFDoA	ND	0.66	2.0 ng/l
PFHpA	1.1	0.53	2.0 ng/l
PFHxA	5.3	0.49	2.0 ng/l
PFHxS	2.6	0.59	2.0 ng/l
PFNA	ND	0.52	2.0 ng/l
PFOA	2.2	0.67	2.0 ng/l
PFOS	ND	0.53	2.0 ng/l
PFTeDA	ND	0.45	2.0 ng/l
PFTTrDA	ND	0.42	2.0 ng/l
PFUnA	ND	0.48	2.0 ng/l

Surrogate(s)

13C2-PFDA	96%	Conc: 36.4	70-130	10/18/23
13C2-PFHxA	97%	Conc: 36.6	70-130	10/18/23
d5-EtFOSAA	113%	Conc: 171	70-130	10/18/23
HFPO-DA-13C3	94%	Conc: 35.5	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S10
3J06133-05 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12						
Batch ID: W3J0656	Preparation: EPA 5030B						
Prepared: 10/09/23 08:36	Analyst: ADM						
1,2,3-Trichloropropane	0.012	0.0012	0.0050	ug/l	1	10/11/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06						
Batch ID: W3J1268	Preparation: EPA 537/SPE						
Prepared: 10/15/23 08:11	Analyst: jna						
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/18/23	
ADONA	ND	0.55	2.0	ng/l	1	10/18/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/18/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/18/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/18/23	
PFBS	2.9	0.58	2.0	ng/l	1	10/18/23	
PFDA	ND	0.45	2.0	ng/l	1	10/18/23	
PFDoA	ND	0.66	2.0	ng/l	1	10/18/23	
PFHpA	1.2	0.53	2.0	ng/l	1	10/18/23	J
PFHxA	5.3	0.49	2.0	ng/l	1	10/18/23	
PFHxS	2.6	0.59	2.0	ng/l	1	10/18/23	
PFNA	ND	0.52	2.0	ng/l	1	10/18/23	
PFOA	2.1	0.67	2.0	ng/l	1	10/18/23	
PFOS	ND	0.53	2.0	ng/l	1	10/18/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/18/23	
PFTTrDA	ND	0.42	2.0	ng/l	1	10/18/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	95%	Conc: 34.9	70-130	10/18/23
13C2-PFHxA	95%	Conc: 34.7	70-130	10/18/23
d5-EtFOSAA	106%	Conc: 155	70-130	10/18/23
HFPO-DA-13C3	90%	Conc: 32.9	70-130	10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S10D
3J06133-06 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12	
Batch ID: W3J0656	Preparation: EPA 5030B	Prepared: 10/09/23 08:36	Analyst: ADM
1,2,3-Trichloropropane	0.012	0.0012	0.0050 ug/l 1 10/11/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06	
Batch ID: W3J1268	Preparation: EPA 537/SPE	Prepared: 10/15/23 08:11	Analyst: jna
11CI-PF3OUdS	ND	0.56	2.0 ng/l 1 10/18/23
9CI-PF3ONS	ND	0.53	2.0 ng/l 1 10/18/23
ADONA	ND	0.55	2.0 ng/l 1 10/18/23
EtFOSAA	ND	0.48	2.0 ng/l 1 10/18/23
HFPO-DA	ND	0.87	2.0 ng/l 1 10/18/23
MeFOSAA	ND	0.58	2.0 ng/l 1 10/18/23
PFBS	3.0	0.58	2.0 ng/l 1 10/18/23
PFDA	ND	0.45	2.0 ng/l 1 10/18/23
PFDoA	ND	0.66	2.0 ng/l 1 10/18/23
PFHpA	1.2	0.53	2.0 ng/l 1 10/18/23
PFHxA	5.3	0.49	2.0 ng/l 1 10/18/23
PFHxS	2.7	0.59	2.0 ng/l 1 10/18/23
PFNA	ND	0.52	2.0 ng/l 1 10/18/23
PFOA	2.2	0.67	2.0 ng/l 1 10/18/23
PFOS	ND	0.53	2.0 ng/l 1 10/18/23
PFTeDA	ND	0.45	2.0 ng/l 1 10/18/23
PFTrDA	ND	0.42	2.0 ng/l 1 10/18/23
PFUnA	ND	0.48	2.0 ng/l 1 10/18/23

Surrogate(s)

13C2-PFDA	98%	Conc: 36.0	70-130	10/18/23
13C2-PFHxA	99%	Conc: 36.2	70-130	10/18/23
d5-EtFOSAA	110%	Conc: 161	70-130	10/18/23
HFPO-DA-13C3	96%	Conc: 35.3	70-130	10/18/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:35

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: Field Blank
 3J06133-07 (Water) Sampled: 10/03/23 16:09 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1268

Preparation: EPA 537/SPE

Prepared: 10/15/23 08:11

Analyst: jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/18/23	
ADONA	ND	0.48	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/18/23	
PFBS	ND	0.50	1.7	ng/l	1	10/18/23	
PFDA	ND	0.39	1.7	ng/l	1	10/18/23	
PFDoA	ND	0.57	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/18/23	
PFNA	ND	0.45	1.7	ng/l	1	10/18/23	
PFOA	ND	0.58	1.7	ng/l	1	10/18/23	
PFOS	ND	0.46	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/18/23	
PFTrDA	ND	0.36	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	96%	Conc: 33.3	70-130		10/18/23
13C2-PFHxA	94%	Conc: 32.5	70-130		10/18/23
d5-EtFOSAA	108%	Conc: 150	70-130		10/18/23
HFPO-DA-13C3	91%	Conc: 31.5	70-130		10/18/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:35

Project Manager: Brown & Caldwell

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0656 - SRL 524M-TCP											
Blank (W3J0656-BLK1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W3J0656-BS1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,2,3-Trichloropropane	0.0197	0.0012	0.0050	ug/l	0.0200		98	80-120			
LCS Dup (W3J0656-BSD1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,2,3-Trichloropropane	0.0192	0.0012	0.0050	ug/l	0.0200		96	80-120	2	20	
Duplicate (W3J0656-DUP1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,2,3-Trichloropropane	0.0101	0.0012	0.0050	ug/l		0.00987			2	20	

Quality Control Results

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J1268 - EPA 537.1											
Blank (W3J1268-BLK1)					Prepared: 10/15/23 Analyzed: 10/18/23						
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
Surrogate(s)											
13C2-PFDA	37.1			ng/l	40.0		93	70-130			
13C2-PFHxA	37.8			ng/l	40.0		95	70-130			
d5-EtFOSAA	167			ng/l	160		105	70-130			
HFPO-DA-13C3	36.3			ng/l	40.0		91	70-130			
LCS (W3J1268-BS1)					Prepared: 10/15/23 Analyzed: 10/18/23						
11CI-PF3OUdS	78.5	0.56	2.0	ng/l	80.0		98	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1268 - EPA 537.1 (Continued)											
LCS (W3J1268-BS1)						Prepared: 10/15/23 Analyzed: 10/18/23					
9CI-PF3ONS	77.6	0.53	2.0	ng/l	80.0		97	70-130			
ADONA	72.0	0.55	2.0	ng/l	80.0		90	70-130			
EtFOSAA	74.9	0.48	2.0	ng/l	80.0		94	70-130			
HFPO-DA	70.3	0.87	2.0	ng/l	80.0		88	70-130			
MeFOSAA	77.6	0.58	2.0	ng/l	80.0		97	70-130			
PFBS	76.2	0.58	2.0	ng/l	80.0		95	70-130			
PFDA	68.7	0.45	2.0	ng/l	80.0		86	70-130			
PFDoA	73.8	0.66	2.0	ng/l	80.0		92	70-130			
PFHpA	74.5	0.53	2.0	ng/l	80.0		93	70-130			
PFHxA	71.9	0.49	2.0	ng/l	80.0		90	70-130			
PFHxS	78.5	0.59	2.0	ng/l	80.0		98	70-130			
PFNA	74.0	0.52	2.0	ng/l	80.0		93	70-130			
PFOA	77.6	0.67	2.0	ng/l	80.0		97	70-130			
PFOS	74.9	0.53	2.0	ng/l	80.0		94	70-130			
PFTeDA	73.9	0.45	2.0	ng/l	80.0		92	70-130			
PFTTrDA	64.9	0.42	2.0	ng/l	80.0		81	70-130			
PFUnA	73.9	0.48	2.0	ng/l	80.0		92	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	38.3			ng/l	40.0		96	70-130			
13C2-PFHxA	38.3			ng/l	40.0		96	70-130			
d5-EtFOSAA	170			ng/l	160		106	70-130			
HFPO-DA-13C3	37.6			ng/l	40.0		94	70-130			
LCS Dup (W3J1268-BSD1)						Prepared: 10/15/23 Analyzed: 10/18/23					
11CI-PF3OUdS	78.6	0.56	2.0	ng/l	80.0		98	70-130	0.2	30	
9CI-PF3ONS	79.6	0.53	2.0	ng/l	80.0		100	70-130	3	30	
ADONA	72.9	0.55	2.0	ng/l	80.0		91	70-130	1	30	
EtFOSAA	75.8	0.48	2.0	ng/l	80.0		95	70-130	1	30	
HFPO-DA	69.8	0.87	2.0	ng/l	80.0		87	70-130	0.7	30	
MeFOSAA	77.2	0.58	2.0	ng/l	80.0		97	70-130	0.5	30	
PFBS	76.1	0.58	2.0	ng/l	80.0		95	70-130	0.02	30	
PFDA	68.4	0.45	2.0	ng/l	80.0		85	70-130	0.5	30	
PFDoA	74.6	0.66	2.0	ng/l	80.0		93	70-130	1	30	
PFHpA	73.6	0.53	2.0	ng/l	80.0		92	70-130	1	30	
PFHxA	71.8	0.49	2.0	ng/l	80.0		90	70-130	0.2	30	
PFHxS	75.2	0.59	2.0	ng/l	80.0		94	70-130	4	30	
PFNA	73.7	0.52	2.0	ng/l	80.0		92	70-130	0.4	30	
PFOA	77.4	0.67	2.0	ng/l	80.0		97	70-130	0.4	30	
PFOS	75.2	0.53	2.0	ng/l	80.0		94	70-130	0.4	30	
PFTeDA	73.1	0.45	2.0	ng/l	80.0		91	70-130	1	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1268 - EPA 537.1 (Continued)											
LCS Dup (W3J1268-BSD1)											
Prepared: 10/15/23 Analyzed: 10/18/23											
PFTTrDA	64.8	0.42	2.0	ng/l	80.0		81	70-130	0.2	30	
PFUnA	74.2	0.48	2.0	ng/l	80.0		93	70-130	0.4	30	
<i>Surrogate(s)</i>											
13C2-PFDA	37.5			ng/l	40.0		94	70-130			
13C2-PFHxA	37.8			ng/l	40.0		95	70-130			
d5-EtFOSAA	173			ng/l	160		108	70-130			
HFPO-DA-13C3	37.8			ng/l	40.0		95	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/20/2023 16:35

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3506133**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles	PROJECT: COSM 97-005	ANALYSES REQUESTED				SPECIAL HANDLING <input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018	PHONE: ckindle@BrwnCald.com	EPA 522 1,4-dioxane	EPA 524 2 VOCs	524M 1,2,3-TCP	537.1 PFOA	
PROJECT MANAGER: Chris Kindle	SAMPLER: invoice to Rose Ford, Rford@BrwnCald.com					

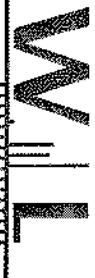
ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524 2 VOCs	524M 1,2,3-TCP	537.1 PFOA	COMMENTS
	10/3	14:53	G	PT-UV17-810	4			X	X	
				PT-UV17-810						
		14:30	G	PT-UV16-810	4			X	X	
		11:30		PT-UV5-810	4			X	X	
		14:04		PT-UV6-810	4			X	X	
		10:45		PT-UV4-810	4			X	X	
		10:45		PT-UV4-810D	4			X	X	
		16:09		Field blank	1				X	

Charges will apply for weekends/holidays.
Method of Shipment:
COMMENTS

RELINQUISHED BY 	DATE / TIME 10/4/23 1:30	RECEIVED BY 	DATE / TIME 10-04-23 1:30	SAMPLE CONDITION: Actual Temperature: 5.0 T-0281 Received On Ice Preserved Evluence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY 	DATE / TIME 10/4/23 3:00PM	RECEIVED BY 	DATE / TIME 10/4/23 15:10		
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **3J06133**

Date/Time Received: **10/04/23 15:10**

WKO Logged by: **Jaime Gomez**

of Samples: **07**

Samples Checked by: **Jaime Gomez**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC				
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Receipt Information				
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
Sample Preservation Verification?				
pH verified upon receipt?				
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3-5-9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> pH paper Lot#
Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> pH Reading:
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Acid Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Amt. added:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PM Comments				

Sample Receipt Checklist Completed by:

Signature: Jaime Gomez

Date: 10/06/23

Work Orders: 3J06135

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 10/16/2023

Received Date: 10/04/2023

Turnaround Time: 5 workdays

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

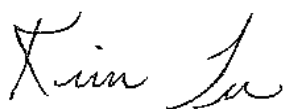
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/04/23 with the Chain-of-Custody document. The samples were received in good condition, at 5.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
10/16/2023 15:26

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV17-S10	Client	3J06135-01	Water	10/03/23 14:53	
PT-UV17-S10D	Client	3J06135-02	Water	10/03/23 14:53	
PT-UV16-S10	Client	3J06135-03	Water	10/03/23 14:30	
PT-UV16-S10D	Client	3J06135-04	Water	10/03/23 14:30	
PT-UV5-S10	Client	3J06135-05	Water	10/03/23 11:30	
PT-UV5-S10D	Client	3J06135-06	Water	10/03/23 11:30	
PT-UV6-S10	Client	3J06135-07	Water	10/03/23 14:04	
PT-UV6-S10D	Client	3J06135-08	Water	10/03/23 14:04	
PT-UV4-S10	Client	3J06135-09	Water	10/03/23 10:45	
PT-UV4-S10D	Client	3J06135-10	Water	10/03/23 10:45	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV17-S10
3J06135-01 (Water) Sampled: 10/03/23 14:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0648	Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20			Analyst: mld	
1,4-Dioxane	0.32	0.028	0.070	ug/l	1	10/10/23	
Surrogate(s)							
1,4-Dioxane-d8	107%	Conc: 11.5	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661	Preparation: EPA 5030B		Prepared: 10/09/23 08:43			Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	0.43	0.27	0.50	ug/l	1	10/10/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	6.2	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.47	0.27	0.50	ug/l	1	10/10/23	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV17-S10
3J06135-01 (Water) Sampled: 10/03/23 14:53 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.5	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.5		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV17-S10
3J06135-01 (Water) Sampled: 10/03/23 14:53 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0661 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:43 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	97%	Conc: 48.6	70-130			10/10/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	94%	Conc: 47.1	70-130			10/10/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV17-S10
3J06135-01RE1 (Water) Sampled: 10/03/23 14:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0916 **Preparation:** EPA 5030B **Prepared:** 10/11/23 12:04 **Analyst:** ADM

Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
--------------	----	------	------	------	---	----------	--

Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
------------------	----	------	------	------	---	----------	--

Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
--------------	----	------	------	------	---	----------	--

Chloromethane	0.33	0.23	0.50	ug/l	1	10/11/23	J
----------------------	-------------	------	------	------	---	----------	---

Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	90%	Conc: 45.0	70-130			10/11/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	91%	Conc: 45.3	70-130			10/11/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV17-S10D
3J06135-02 (Water) Sampled: 10/03/23 14:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0648 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:20 **Analyst:** mld

1,4-Dioxane	0.25	0.028	0.070	ug/l	1	10/10/23	
--------------------	-------------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	105%	Conc: 10.7	70-130			10/10/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV16-S10
3J06135-03 (Water) Sampled: 10/03/23 14:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	2.4	0.028	0.070	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	112%	Conc: 11.9	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	0.40	0.27	0.50	ug/l	1	10/10/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	3.8	3.1	5.0	ug/l	1	10/10/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.50	0.27	0.50	ug/l	1	10/10/23	J

3J06135

Page 6 of 34

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV16-S10
3J06135-03 (Water) Sampled: 10/03/23 14:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.1	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.1		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV16-S10
3J06135-03 (Water) Sampled: 10/03/23 14:30 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 Instr: GCMS08
Batch ID: W3J0661 Preparation: EPA 5030B Prepared: 10/09/23 08:43 Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	101%	Conc: 50.5	70-130			10/10/23	
4-Bromofluorobenzene	100%	Conc: 49.8	70-130			10/10/23	

Sample Results

(Continued)

Sample: PT-UV16-S10
3J06135-03RE1 (Water) Sampled: 10/03/23 14:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 Instr: GCMS08
Batch ID: W3J0916 Preparation: EPA 5030B Prepared: 10/11/23 12:04 Analyst: ADM

Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.59	0.23	0.50	ug/l	1	10/11/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	90%	Conc: 45.0	70-130			10/11/23	
4-Bromofluorobenzene	92%	Conc: 46.1	70-130			10/11/23	

Sample Results

(Continued)

Sample: PT-UV16-S10D
3J06135-04 (Water) Sampled: 10/03/23 14:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 Instr: GCMS20
Batch ID: W3J0648 Preparation: EPA 522/SPE Prepared: 10/09/23 08:20 Analyst: mld

1,4-Dioxane	0.32	0.028	0.070	ug/l	1	10/10/23	
-------------	------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	103%	Conc: 10.5	70-130			10/10/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV5-S10
3J06135-05 (Water) Sampled: 10/03/23 11:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0648		Preparation: EPA 522/SPE			Prepared: 10/09/23 08:20		Analyst: mld
1,4-Dioxane	0.14	0.028	0.070	ug/l	1	10/10/23	
Surrogate(s)							
1,4-Dioxane-d8	102%	Conc: 10.1	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B			Prepared: 10/09/23 08:43		Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	8.9	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.49	0.27	0.50	ug/l	1	10/10/23	J

3J06135

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV5-S10
3J06135-05 (Water) Sampled: 10/03/23 11:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.2	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.2		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV5-S10
3J06135-05 (Water) Sampled: 10/03/23 11:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	95%	Conc: 47.7	70-130			10/10/23	
4-Bromofluorobenzene	94%	Conc: 47.0	70-130			10/10/23	

Sample Results

(Continued)

Sample: PT-UV5-S10
3J06135-05RE1 (Water) Sampled: 10/03/23 11:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.63	0.23	0.50	ug/l	1	10/11/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	85%	Conc: 42.3	70-130			10/11/23	
4-Bromofluorobenzene	87%	Conc: 43.3	70-130			10/11/23	

Sample Results

(Continued)

Sample: PT-UV5-S10D
3J06135-06 (Water) Sampled: 10/03/23 11:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 522 Instr: GCMS20							
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	0.11	0.028	0.070	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	104%	Conc: 10.7	70-130			10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV6-S10
3J06135-07 (Water) Sampled: 10/03/23 14:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	0.37	0.028	0.070	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	108%	Conc: 10.6	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.62	0.27	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV6-S10
3J06135-07 (Water) Sampled: 10/03/23 14:04 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	3.6	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	3.6		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV6-S10
3J06135-07 (Water) Sampled: 10/03/23 14:04 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0661 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:43 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	93%	Conc: 46.6	70-130			10/10/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	90%	Conc: 45.2	70-130			10/10/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV6-S10
3J06135-07RE1 (Water) Sampled: 10/03/23 14:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0916 **Preparation:** EPA 5030B **Prepared:** 10/11/23 12:04 **Analyst:** ADM

Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
--------------	----	------	------	------	---	----------	--

Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
------------------	----	------	------	------	---	----------	--

Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
--------------	----	------	------	------	---	----------	--

Chloromethane	0.75	0.23	0.50	ug/l	1	10/11/23	
----------------------	-------------	------	------	------	---	----------	--

Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	87%	Conc: 43.3	70-130			10/11/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	88%	Conc: 44.0	70-130			10/11/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV6-S10D
3J06135-08 (Water) Sampled: 10/03/23 14:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0648 **Preparation:** EPA 522/SPE **Prepared:** 10/09/23 08:20 **Analyst:** mld

1,4-Dioxane	2.2	0.028	0.070	ug/l	1	10/10/23	
--------------------	------------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	108%	Conc: 10.9	70-130			10/10/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S10
3J06135-09 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	0.46	0.028	0.070	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	105%	Conc: 11.3	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	5.0	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.54	0.27	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S10
3J06135-09 (Water) Sampled: 10/03/23 10:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	3.8	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	3.8		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S10
3J06135-09 (Water) Sampled: 10/03/23 10:45 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0661 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:43 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	95%	Conc: 47.5	70-130			10/10/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	93%	Conc: 46.4	70-130			10/10/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV4-S10
3J06135-09RE1 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0916 **Preparation:** EPA 5030B **Prepared:** 10/11/23 12:04 **Analyst:** ADM

Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
--------------	----	------	------	------	---	----------	--

Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
------------------	----	------	------	------	---	----------	--

Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
--------------	----	------	------	------	---	----------	--

Chloromethane	ND	0.23	0.50	ug/l	1	10/11/23	
---------------	----	------	------	------	---	----------	--

Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 43.8	70-130			10/11/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	87%	Conc: 43.5	70-130			10/11/23	
----------------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S10D
3J06135-10 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0648		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:20		Analyst: mld	
1,4-Dioxane	0.30	0.028	0.070	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	94%	Conc: 9.33	70-130			10/10/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	0.29	0.27	0.50	ug/l	1	10/10/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	4.8	3.1	5.0	ug/l	1	10/10/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.50	0.27	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S10D
3J06135-10 (Water) Sampled: 10/03/23 10:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.7	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.7		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S10D
3J06135-10 (Water) Sampled: 10/03/23 10:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0661 **Preparation:** EPA 5030B **Prepared:** 10/09/23 08:43 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	95%	Conc: 47.3	70-130			10/10/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	93%	Conc: 46.4	70-130			10/10/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV4-S10D
3J06135-10RE1 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0916 **Preparation:** EPA 5030B **Prepared:** 10/11/23 12:04 **Analyst:** ADM

Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
--------------	----	------	------	------	---	----------	--

Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
------------------	----	------	------	------	---	----------	--

Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
--------------	----	------	------	------	---	----------	--

Chloromethane	0.99	0.23	0.50	ug/l	1	10/11/23	
----------------------	-------------	------	------	------	---	----------	--

Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	91%	Conc: 45.4	70-130			10/11/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	91%	Conc: 45.5	70-130			10/11/23	
----------------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0648 - EPA 522											
Blank (W3J0648-BLK1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.9			ug/l	10.0		109	70-130			
LCS (W3J0648-BS1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,4-Dioxane	0.0598	0.028	0.070	ug/l	0.0600		100	70-130			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.4			ug/l	10.0		104	70-130			
LCS Dup (W3J0648-BSD1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,4-Dioxane	0.0761	0.028	0.070	ug/l	0.0600		127	70-130	24	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.4			ug/l	10.0		104	70-130			

Quality Control Results

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2											
Blank (W3J0661-BLK1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
Blank (W3J0661-BLK1)					Prepared: 10/09/23 Analyzed: 10/10/23						
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
Blank (W3J0661-BLK1)											
					Prepared: 10/09/23 Analyzed: 10/10/23						
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	47.7			ug/l	50.0		95	70-130			
4-Bromofluorobenzene	43.8			ug/l	50.0		88	70-130			
LCS (W3J0661-BS1)											
					Prepared: 10/09/23 Analyzed: 10/10/23						
1,1,1,2-Tetrachloroethane	4.38	0.24	0.50	ug/l	5.00		88	70-130			
1,1,1-Trichloroethane	5.43	0.26	0.50	ug/l	5.00		109	70-130			
1,1,2,2-Tetrachloroethane	4.57	0.20	0.50	ug/l	5.00		91	70-130			
1,1,2-Trichloroethane	4.78	0.19	0.50	ug/l	5.00		96	70-130			
1,1-Dichloroethane	5.97	0.27	0.50	ug/l	5.00		119	70-130			
1,1-Dichloroethene	3.87	0.16	0.50	ug/l	5.00		77	70-130			
1,1-Dichloropropene	3.96	0.14	0.50	ug/l	5.00		79	70-130			
1,2,3-Trichlorobenzene	4.20	0.40	0.50	ug/l	5.00		84	70-130			
1,2,3-Trichloropropane	4.67	0.22	0.50	ug/l	5.00		93	70-130			
1,2,4-Trichlorobenzene	4.13	0.17	0.50	ug/l	5.00		83	70-130			
1,2,4-Trimethylbenzene	5.02	0.20	0.50	ug/l	5.00		100	70-130			
1,2-Dichloroethane	4.86	0.24	0.50	ug/l	5.00		97	70-130			
1,2-Dichloropropane	4.68	0.13	0.50	ug/l	5.00		94	70-130			
1,3,5-Trimethylbenzene	5.00	0.17	0.50	ug/l	5.00		100	70-130			
1,3-Dichloropropane	4.83	0.27	0.50	ug/l	5.00		97	70-130			
2,2-Dichloropropane	5.40	0.17	0.50	ug/l	5.00		108	70-130			
2-Butanone	6.97	1.5	5.0	ug/l	5.00		139	70-130			Q-08
2-Chlorotoluene	5.13	0.15	0.50	ug/l	5.00		103	70-130			
2-Hexanone	5.29	1.2	5.0	ug/l	5.00		106	70-130			
4-Chlorotoluene	5.12	0.15	0.50	ug/l	5.00		102	70-130			
4-Methyl-2-pentanone	5.04	1.8	5.0	ug/l	5.00		101	70-130			
Acetone	43.1	3.1	5.0	ug/l	50.0		86	70-130			
Benzene	4.67	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.42	0.15	0.50	ug/l	5.00		88	70-130			
Bromochloromethane	5.86	0.15	0.50	ug/l	5.00		117	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)										
LCS (W3J0661-BS1)					Prepared: 10/09/23 Analyzed: 10/10/23					
Bromodichloromethane	4.58	0.24	0.50	ug/l	5.00		92 70-130			
Bromoform	4.31	0.38	0.50	ug/l	5.00		86 70-130			
Bromomethane	3.11	0.27	0.50	ug/l	5.00		62 70-130			Q-11
Carbon Disulfide	3.39	0.25	0.50	ug/l	5.00		68 70-130			Q-11
Carbon tetrachloride	4.41	0.27	0.50	ug/l	5.00		88 70-130			
Chlorobenzene	4.66	0.15	0.50	ug/l	5.00		93 70-130			
Chloroethane	3.05	0.17	0.50	ug/l	5.00		61 70-130			Q-11
Chloroform	6.13	0.27	0.50	ug/l	5.00		123 70-130			
Chloromethane	4.13	0.23	0.50	ug/l	5.00		83 70-130			
cis-1,2-Dichloroethene	5.93	0.25	0.50	ug/l	5.00		119 70-130			
cis-1,3-Dichloropropene	4.02	0.30	0.50	ug/l	5.00		80 70-130			
Dibromochloromethane	4.59	0.20	0.50	ug/l	5.00		92 70-130			
Dibromomethane	4.93	0.20	0.50	ug/l	5.00		99 70-130			
Dichlorodifluoromethane (Freon 12)	4.50	0.45	0.50	ug/l	5.00		90 70-130			
Di-isopropyl ether	21.9	1.1	2.0	ug/l	20.0		110 70-130			
Ethyl tert-butyl ether	22.8	1.0	2.0	ug/l	20.0		114 70-130			
Ethylbenzene	4.54	0.21	0.50	ug/l	5.00		91 70-130			
Freon 113	3.76	1.5	5.0	ug/l	5.00		75 70-130			J
Hexachlorobutadiene	4.30	0.40	0.50	ug/l	5.00		86 70-130			
Isopropylbenzene	4.60	0.18	0.50	ug/l	5.00		92 70-130			
m,p-Xylene	4.58	0.33	0.50	ug/l	5.00		92 70-130			
m-Dichlorobenzene	5.22	0.14	0.50	ug/l	5.00		104 70-130			
Methyl tert-butyl ether (MTBE)	17.4	0.94	2.0	ug/l	20.0		87 70-130			
Methylene chloride	4.35	0.30	0.50	ug/l	5.00		87 70-130			
Naphthalene	4.27	0.35	0.50	ug/l	5.00		85 70-130			
n-Butylbenzene	4.94	0.29	0.50	ug/l	5.00		99 70-130			
n-Propylbenzene	5.52	0.18	0.50	ug/l	5.00		110 70-130			
o-Dichlorobenzene	5.36	0.19	0.50	ug/l	5.00		107 70-130			
o-Xylene	4.94	0.20	0.50	ug/l	5.00		99 70-130			
p-Dichlorobenzene	4.95	0.18	0.50	ug/l	5.00		99 70-130			
p-Isopropyltoluene	5.22	0.25	0.50	ug/l	5.00		104 70-130			
sec-Butylbenzene	5.27	0.24	0.50	ug/l	5.00		105 70-130			
Styrene	5.01	0.19	0.50	ug/l	5.00		100 70-130			
Tert-amyl methyl ether	20.2	0.59	2.0	ug/l	20.0		101 70-130			
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101 70-130			
Tetrachloroethene	4.00	0.18	0.50	ug/l	5.00		80 70-130			
Toluene	4.75	0.29	0.50	ug/l	5.00		95 70-130			
trans-1,2-Dichloroethene	4.32	0.26	0.50	ug/l	5.00		86 70-130			
trans-1,3-Dichloropropene	4.56	0.32	0.50	ug/l	5.00		91 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
LCS (W3J0661-BS1)						Prepared: 10/09/23 Analyzed: 10/10/23					
Trichloroethene	4.06	0.18	0.50	ug/l	5.00		81	70-130			
Trichlorofluoromethane	4.08	0.18	0.50	ug/l	5.00		82	70-130			
Vinyl chloride	3.81	0.18	0.50	ug/l	5.00		76	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	55.0			ug/l	50.0		110	70-130			
4-Bromofluorobenzene	48.2			ug/l	50.0		96	70-130			
LCS Dup (W3J0661-BSD1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,1,2-Tetrachloroethane	4.26	0.24	0.50	ug/l	5.00		85	70-130	3	30	
1,1,1-Trichloroethane	5.16	0.26	0.50	ug/l	5.00		103	70-130	5	30	
1,1,2,2-Tetrachloroethane	4.33	0.20	0.50	ug/l	5.00		87	70-130	5	30	
1,1,2-Trichloroethane	4.66	0.19	0.50	ug/l	5.00		93	70-130	2	30	
1,1-Dichloroethane	6.12	0.27	0.50	ug/l	5.00		122	70-130	3	30	
1,1-Dichloroethene	3.69	0.16	0.50	ug/l	5.00		74	70-130	5	30	
1,1-Dichloropropene	3.84	0.14	0.50	ug/l	5.00		77	70-130	3	30	
1,2,3-Trichlorobenzene	4.21	0.40	0.50	ug/l	5.00		84	70-130	0.3	30	
1,2,3-Trichloropropane	4.57	0.22	0.50	ug/l	5.00		91	70-130	2	30	
1,2,4-Trichlorobenzene	4.11	0.17	0.50	ug/l	5.00		82	70-130	0.4	30	
1,2,4-Trimethylbenzene	4.72	0.20	0.50	ug/l	5.00		94	70-130	6	30	
1,2-Dichloroethane	4.72	0.24	0.50	ug/l	5.00		94	70-130	3	30	
1,2-Dichloropropane	4.53	0.13	0.50	ug/l	5.00		91	70-130	3	30	
1,3,5-Trimethylbenzene	4.65	0.17	0.50	ug/l	5.00		93	70-130	7	30	
1,3-Dichloropropane	4.69	0.27	0.50	ug/l	5.00		94	70-130	3	30	
2,2-Dichloropropane	5.07	0.17	0.50	ug/l	5.00		101	70-130	6	30	
2-Butanone	6.93	1.5	5.0	ug/l	5.00		139	70-130	0.6	30	Q-08
2-Chlorotoluene	4.77	0.15	0.50	ug/l	5.00		95	70-130	7	30	
2-Hexanone	5.17	1.2	5.0	ug/l	5.00		103	70-130	2	30	
4-Chlorotoluene	4.78	0.15	0.50	ug/l	5.00		96	70-130	7	30	
4-Methyl-2-pentanone	4.92	1.8	5.0	ug/l	5.00		98	70-130	2	30	J
Acetone	43.8	3.1	5.0	ug/l	50.0		88	70-130	2	30	
Benzene	4.42	0.15	0.50	ug/l	5.00		88	70-130	6	30	
Bromobenzene	4.24	0.15	0.50	ug/l	5.00		85	70-130	4	30	
Bromochloromethane	5.57	0.15	0.50	ug/l	5.00		111	70-130	5	30	
Bromodichloromethane	4.54	0.24	0.50	ug/l	5.00		91	70-130	0.9	30	
Bromoform	4.12	0.38	0.50	ug/l	5.00		82	70-130	4	30	
Bromomethane	2.85	0.27	0.50	ug/l	5.00		57	70-130	9	30	Q-11
Carbon Disulfide	3.16	0.25	0.50	ug/l	5.00		63	70-130	7	30	Q-11
Carbon tetrachloride	4.25	0.27	0.50	ug/l	5.00		85	70-130	4	30	
Chlorobenzene	4.43	0.15	0.50	ug/l	5.00		89	70-130	5	30	
Chloroethane	2.87	0.17	0.50	ug/l	5.00		57	70-130	6	30	Q-11

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
LCS Dup (W3J0661-bsd1)						Prepared: 10/09/23 Analyzed: 10/10/23					
Chloroform	5.78	0.27	0.50	ug/l	5.00		116	70-130	6	30	
Chloromethane	4.33	0.23	0.50	ug/l	5.00		87	70-130	5	30	
cis-1,2-Dichloroethene	5.54	0.25	0.50	ug/l	5.00		111	70-130	7	30	
cis-1,3-Dichloropropene	3.91	0.30	0.50	ug/l	5.00		78	70-130	3	30	
Dibromochloromethane	4.51	0.20	0.50	ug/l	5.00		90	70-130	2	30	
Dibromomethane	4.74	0.20	0.50	ug/l	5.00		95	70-130	4	30	
Dichlorodifluoromethane (Freon 12)	4.54	0.45	0.50	ug/l	5.00		91	70-130	0.8	30	
Di-isopropyl ether	23.2	1.1	2.0	ug/l	20.0		116	70-130	6	30	
Ethyl tert-butyl ether	22.6	1.0	2.0	ug/l	20.0		113	70-130	1	30	
Ethylbenzene	4.26	0.21	0.50	ug/l	5.00		85	70-130	6	30	
Freon 113	3.57	1.5	5.0	ug/l	5.00		71	70-130	5	30	J
Hexachlorobutadiene	4.09	0.40	0.50	ug/l	5.00		82	70-130	5	30	
Isopropylbenzene	4.24	0.18	0.50	ug/l	5.00		85	70-130	8	30	
m,p-Xylene	4.25	0.33	0.50	ug/l	5.00		85	70-130	7	30	
m-Dichlorobenzene	4.98	0.14	0.50	ug/l	5.00		100	70-130	5	30	
Methyl tert-butyl ether (MTBE)	18.3	0.94	2.0	ug/l	20.0		92	70-130	5	30	
Methylene chloride	4.26	0.30	0.50	ug/l	5.00		85	70-130	2	30	
Naphthalene	4.20	0.35	0.50	ug/l	5.00		84	70-130	2	30	
n-Butylbenzene	4.65	0.29	0.50	ug/l	5.00		93	70-130	6	30	
n-Propylbenzene	5.13	0.18	0.50	ug/l	5.00		103	70-130	7	30	
o-Dichlorobenzene	5.10	0.19	0.50	ug/l	5.00		102	70-130	5	30	
o-Xylene	4.58	0.20	0.50	ug/l	5.00		92	70-130	7	30	
p-Dichlorobenzene	4.69	0.18	0.50	ug/l	5.00		94	70-130	5	30	
p-Isopropyltoluene	4.87	0.25	0.50	ug/l	5.00		97	70-130	7	30	
sec-Butylbenzene	4.88	0.24	0.50	ug/l	5.00		98	70-130	8	30	
Styrene	4.67	0.19	0.50	ug/l	5.00		93	70-130	7	30	
Tert-amyl methyl ether	19.9	0.59	2.0	ug/l	20.0		99	70-130	2	30	
tert-Butylbenzene	4.72	0.18	0.50	ug/l	5.00		94	70-130	7	30	
Tetrachloroethene	3.86	0.18	0.50	ug/l	5.00		77	70-130	3	30	
Toluene	4.56	0.29	0.50	ug/l	5.00		91	70-130	4	30	
trans-1,2-Dichloroethene	4.28	0.26	0.50	ug/l	5.00		86	70-130	1	30	
trans-1,3-Dichloropropene	4.44	0.32	0.50	ug/l	5.00		89	70-130	3	30	
Trichloroethene	3.88	0.18	0.50	ug/l	5.00		78	70-130	4	30	
Trichlorofluoromethane	3.84	0.18	0.50	ug/l	5.00		77	70-130	6	30	
Vinyl chloride	3.74	0.18	0.50	ug/l	5.00		75	70-130	2	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.1			ug/l	50.0		108	70-130			
4-Bromofluorobenzene	47.6			ug/l	50.0		95	70-130			

Batch: W3J0916 - EPA 524.2

3J06135

Page 26 of 34

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
Blank (W3J0916-BLK1)						Prepared & Analyzed: 10/11/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
Blank (W3J0916-BLK1)						Prepared & Analyzed: 10/11/23					
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.2			ug/l	50.0		88	70-130			
4-Bromofluorobenzene	45.1			ug/l	50.0		90	70-130			
LCS (W3J0916-BS1)						Prepared & Analyzed: 10/11/23					
1,1,1,2-Tetrachloroethane	5.04	0.24	0.50	ug/l	5.00		101	70-130			
1,1,1-Trichloroethane	4.58	0.26	0.50	ug/l	5.00		92	70-130			
1,1,2,2-Tetrachloroethane	4.75	0.20	0.50	ug/l	5.00		95	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)										
LCS (W3J0916-BS1)					Prepared & Analyzed: 10/11/23					
1,1,2-Trichloroethane	4.98	0.19	0.50	ug/l	5.00		100 70-130			
1,1-Dichloroethane	5.32	0.27	0.50	ug/l	5.00		106 70-130			
1,1-Dichloroethene	5.28	0.16	0.50	ug/l	5.00		106 70-130			
1,1-Dichloropropene	4.98	0.14	0.50	ug/l	5.00		100 70-130			
1,2,3-Trichlorobenzene	4.41	0.40	0.50	ug/l	5.00		88 70-130			
1,2,3-Trichloropropane	4.78	0.22	0.50	ug/l	5.00		96 70-130			
1,2,4-Trichlorobenzene	4.74	0.17	0.50	ug/l	5.00		95 70-130			
1,2,4-Trimethylbenzene	4.84	0.20	0.50	ug/l	5.00		97 70-130			
1,2-Dichloroethane	4.87	0.24	0.50	ug/l	5.00		97 70-130			
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00		95 70-130			
1,3,5-Trimethylbenzene	4.77	0.17	0.50	ug/l	5.00		95 70-130			
1,3-Dichloropropane	5.05	0.27	0.50	ug/l	5.00		101 70-130			J
2,2-Dichloropropane	5.10	0.17	0.50	ug/l	5.00		102 70-130			
2-Butanone	5.19	1.5	5.0	ug/l	5.00		104 70-130			
2-Chlorotoluene	4.65	0.15	0.50	ug/l	5.00		93 70-130			
2-Hexanone	4.80	1.2	5.0	ug/l	5.00		96 70-130			J
4-Chlorotoluene	4.54	0.15	0.50	ug/l	5.00		91 70-130			
4-Methyl-2-pentanone	4.63	1.8	5.0	ug/l	5.00		93 70-130			J
Acetone	53.7	3.1	5.0	ug/l	50.0		107 70-130			
Benzene	4.77	0.15	0.50	ug/l	5.00		95 70-130			
Bromobenzene	4.79	0.15	0.50	ug/l	5.00		96 70-130			
Bromochloromethane	4.90	0.15	0.50	ug/l	5.00		98 70-130			
Bromodichloromethane	4.78	0.24	0.50	ug/l	5.00		96 70-130			
Bromoform	4.65	0.38	0.50	ug/l	5.00		93 70-130			
Bromomethane	4.60	0.27	0.50	ug/l	5.00		92 70-130			
Carbon Disulfide	5.16	0.25	0.50	ug/l	5.00		103 70-130			
Carbon tetrachloride	4.88	0.27	0.50	ug/l	5.00		98 70-130			
Chlorobenzene	4.94	0.15	0.50	ug/l	5.00		99 70-130			
Chloroethane	4.48	0.17	0.50	ug/l	5.00		90 70-130			
Chloroform	4.99	0.27	0.50	ug/l	5.00		100 70-130			
Chloromethane	4.76	0.23	0.50	ug/l	5.00		95 70-130			
cis-1,2-Dichloroethene	5.24	0.25	0.50	ug/l	5.00		105 70-130			
cis-1,3-Dichloropropene	4.63	0.30	0.50	ug/l	5.00		93 70-130			
Dibromochloromethane	4.74	0.20	0.50	ug/l	5.00		95 70-130			
Dibromomethane	4.79	0.20	0.50	ug/l	5.00		96 70-130			
Dichlorodifluoromethane (Freon 12)	4.47	0.45	0.50	ug/l	5.00		89 70-130			
Di-isopropyl ether	24.7	1.1	2.0	ug/l	20.0		124 70-130			
Ethyl tert-butyl ether	22.6	1.0	2.0	ug/l	20.0		113 70-130			
Ethylbenzene	4.56	0.21	0.50	ug/l	5.00		91 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)										
LCS (W3J0916-BS1)					Prepared & Analyzed: 10/11/23					
Freon 113	5.28	1.5	5.0	ug/l	5.00		106 70-130			
Hexachlorobutadiene	4.47	0.40	0.50	ug/l	5.00		89 70-130			
Isopropylbenzene	4.59	0.18	0.50	ug/l	5.00		92 70-130			
m,p-Xylene	4.70	0.33	0.50	ug/l	5.00		94 70-130			
m-Dichlorobenzene	4.64	0.14	0.50	ug/l	5.00		93 70-130			
Methyl tert-butyl ether (MTBE)	21.9	0.94	2.0	ug/l	20.0		109 70-130			
Methylene chloride	5.28	0.30	0.50	ug/l	5.00		106 70-130			
Naphthalene	4.66	0.35	0.50	ug/l	5.00		93 70-130			
n-Butylbenzene	4.62	0.29	0.50	ug/l	5.00		92 70-130			
n-Propylbenzene	4.75	0.18	0.50	ug/l	5.00		95 70-130			
o-Dichlorobenzene	5.11	0.19	0.50	ug/l	5.00		102 70-130			
o-Xylene	4.85	0.20	0.50	ug/l	5.00		97 70-130			
p-Dichlorobenzene	5.11	0.18	0.50	ug/l	5.00		102 70-130			
p-Isopropyltoluene	4.78	0.25	0.50	ug/l	5.00		96 70-130			
sec-Butylbenzene	4.71	0.24	0.50	ug/l	5.00		94 70-130			
Styrene	4.81	0.19	0.50	ug/l	5.00		96 70-130			
Tert-amyl methyl ether	20.4	0.59	2.0	ug/l	20.0		102 70-130			
tert-Butylbenzene	4.57	0.18	0.50	ug/l	5.00		91 70-130			
Tetrachloroethene	4.64	0.18	0.50	ug/l	5.00		93 70-130			
Toluene	5.09	0.29	0.50	ug/l	5.00		102 70-130			
trans-1,2-Dichloroethene	5.28	0.26	0.50	ug/l	5.00		106 70-130			
trans-1,3-Dichloropropene	4.93	0.32	0.50	ug/l	5.00		99 70-130			
Trichloroethene	4.44	0.18	0.50	ug/l	5.00		89 70-130			
Trichlorofluoromethane	5.72	0.18	0.50	ug/l	5.00		114 70-130			
Vinyl chloride	4.48	0.18	0.50	ug/l	5.00		90 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109 70-130			
4-Bromofluorobenzene	53.7			ug/l	50.0		107 70-130			
LCS Dup (W3J0916-BSD1)					Prepared & Analyzed: 10/11/23					
1,1,1,2-Tetrachloroethane	4.83	0.24	0.50	ug/l	5.00		97 70-130	4	30	
1,1,1-Trichloroethane	4.63	0.26	0.50	ug/l	5.00		93 70-130	1	30	
1,1,2,2-Tetrachloroethane	5.02	0.20	0.50	ug/l	5.00		100 70-130	6	30	
1,1,2-Trichloroethane	4.90	0.19	0.50	ug/l	5.00		98 70-130	1	30	
1,1-Dichloroethane	4.58	0.27	0.50	ug/l	5.00		92 70-130	15	30	
1,1-Dichloroethene	4.82	0.16	0.50	ug/l	5.00		96 70-130	9	30	
1,1-Dichloropropene	4.48	0.14	0.50	ug/l	5.00		90 70-130	11	30	
1,2,3-Trichlorobenzene	4.73	0.40	0.50	ug/l	5.00		95 70-130	7	30	
1,2,3-Trichloropropane	5.04	0.22	0.50	ug/l	5.00		101 70-130	5	30	
1,2,4-Trichlorobenzene	5.09	0.17	0.50	ug/l	5.00		102 70-130	7	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
LCS Dup (W3J0916-BSD1)					Prepared & Analyzed: 10/11/23						
1,2,4-Trimethylbenzene	4.71	0.20	0.50	ug/l	5.00	94	70-130	3	30		
1,2-Dichloroethane	4.49	0.24	0.50	ug/l	5.00	90	70-130	8	30		
1,2-Dichloropropane	4.51	0.13	0.50	ug/l	5.00	90	70-130	5	30		
1,3,5-Trimethylbenzene	4.57	0.17	0.50	ug/l	5.00	91	70-130	4	30		
1,3-Dichloropropane	4.91	0.27	0.50	ug/l	5.00	98	70-130	3	30		
2,2-Dichloropropane	4.58	0.17	0.50	ug/l	5.00	92	70-130	11	30		
2-Butanone	4.37	1.5	5.0	ug/l	5.00	87	70-130	17	30	J	
2-Chlorotoluene	4.44	0.15	0.50	ug/l	5.00	89	70-130	5	30		
2-Hexanone	4.70	1.2	5.0	ug/l	5.00	94	70-130	2	30	J	
4-Chlorotoluene	4.35	0.15	0.50	ug/l	5.00	87	70-130	4	30		
4-Methyl-2-pentanone	4.50	1.8	5.0	ug/l	5.00	90	70-130	3	30	J	
Acetone	51.7	3.1	5.0	ug/l	50.0	103	70-130	4	30		
Benzene	4.46	0.15	0.50	ug/l	5.00	89	70-130	7	30		
Bromobenzene	4.68	0.15	0.50	ug/l	5.00	94	70-130	2	30		
Bromochloromethane	4.61	0.15	0.50	ug/l	5.00	92	70-130	6	30		
Bromodichloromethane	4.47	0.24	0.50	ug/l	5.00	89	70-130	7	30		
Bromoform	4.52	0.38	0.50	ug/l	5.00	90	70-130	3	30		
Bromomethane	7.45	0.27	0.50	ug/l	5.00	149	70-130	47	30	A-01, Q-08	
Carbon Disulfide	4.58	0.25	0.50	ug/l	5.00	92	70-130	12	30		
Carbon tetrachloride	4.30	0.27	0.50	ug/l	5.00	86	70-130	12	30		
Chlorobenzene	4.72	0.15	0.50	ug/l	5.00	94	70-130	5	30		
Chloroethane	7.12	0.17	0.50	ug/l	5.00	142	70-130	46	30	A-01, Q-08	
Chloroform	4.51	0.27	0.50	ug/l	5.00	90	70-130	10	30		
Chloromethane	5.67	0.23	0.50	ug/l	5.00	113	70-130	18	30		
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00	91	70-130	14	30		
cis-1,3-Dichloropropene	4.32	0.30	0.50	ug/l	5.00	86	70-130	7	30		
Dibromochloromethane	4.52	0.20	0.50	ug/l	5.00	90	70-130	5	30		
Dibromomethane	4.58	0.20	0.50	ug/l	5.00	92	70-130	4	30		
Dichlorodifluoromethane (Freon 12)	4.48	0.45	0.50	ug/l	5.00	90	70-130	0.2	30		
Di-isopropyl ether	22.2	1.1	2.0	ug/l	20.0	111	70-130	10	30		
Ethyl tert-butyl ether	21.8	1.0	2.0	ug/l	20.0	109	70-130	3	30		
Ethylbenzene	4.21	0.21	0.50	ug/l	5.00	84	70-130	8	30		
Freon 113	4.72	1.5	5.0	ug/l	5.00	94	70-130	11	30	J	
Hexachlorobutadiene	4.28	0.40	0.50	ug/l	5.00	86	70-130	4	30		
Isopropylbenzene	4.32	0.18	0.50	ug/l	5.00	86	70-130	6	30		
m,p-Xylene	4.36	0.33	0.50	ug/l	5.00	87	70-130	8	30		
m-Dichlorobenzene	4.51	0.14	0.50	ug/l	5.00	90	70-130	3	30		
Methyl tert-butyl ether (MTBE)	21.0	0.94	2.0	ug/l	20.0	105	70-130	4	30		
Methylene chloride	4.61	0.30	0.50	ug/l	5.00	92	70-130	14	30		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/16/2023 15:26

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
LCS Dup (W3J0916-BSD1)											
Prepared & Analyzed: 10/11/23											
Naphthalene	4.81	0.35	0.50	ug/l	5.00		96	70-130	3	30	
n-Butylbenzene	4.44	0.29	0.50	ug/l	5.00		89	70-130	4	30	
n-Propylbenzene	4.43	0.18	0.50	ug/l	5.00		89	70-130	7	30	
o-Dichlorobenzene	4.99	0.19	0.50	ug/l	5.00		100	70-130	2	30	
o-Xylene	4.63	0.20	0.50	ug/l	5.00		93	70-130	4	30	
p-Dichlorobenzene	4.97	0.18	0.50	ug/l	5.00		99	70-130	3	30	
p-Isopropyltoluene	4.52	0.25	0.50	ug/l	5.00		90	70-130	6	30	
sec-Butylbenzene	4.35	0.24	0.50	ug/l	5.00		87	70-130	8	30	
Styrene	4.59	0.19	0.50	ug/l	5.00		92	70-130	5	30	
Tert-amyl methyl ether	21.6	0.59	2.0	ug/l	20.0		108	70-130	6	30	
tert-Butylbenzene	4.33	0.18	0.50	ug/l	5.00		87	70-130	5	30	
Tetrachloroethene	4.20	0.18	0.50	ug/l	5.00		84	70-130	10	30	
Toluene	4.81	0.29	0.50	ug/l	5.00		96	70-130	6	30	
trans-1,2-Dichloroethene	4.50	0.26	0.50	ug/l	5.00		90	70-130	16	30	
trans-1,3-Dichloropropene	4.81	0.32	0.50	ug/l	5.00		96	70-130	2	30	
Trichloroethene	4.16	0.18	0.50	ug/l	5.00		83	70-130	7	30	
Trichlorofluoromethane	5.45	0.18	0.50	ug/l	5.00		109	70-130	5	30	
Vinyl chloride	5.95	0.18	0.50	ug/l	5.00		119	70-130	28	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.6			ug/l	50.0		105	70-130			
4-Bromofluorobenzene	51.5			ug/l	50.0		103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/16/2023 15:26

Notes and Definitions

Item	Definition
A-01	The RPD results exceeded the QC control limits. The batch was accepted based on acceptable BS recovery.
J	Estimated conc. detected <MRL and >MDL.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
Q-11	This analyte is low bias in QC samples, sample result is suspect.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **35J06135**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING																			
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		<table border="1"> <tr> <td>EPA 522 1,4-dioxane</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>EPA 524.2 VOCs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				EPA 522 1,4-dioxane									EPA 524.2 VOCs									<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input checked="" type="checkbox"/> 4 - 5 Day Rush 90% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
EPA 522 1,4-dioxane																											
EPA 524.2 VOCs																											
PROJECT MANAGER Chris Kindle		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com						Charges will apply for weekends/holidays																			

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs			Method of Shipment:	COMMENTS
	10/3	14:53	G	PT-UV17-S10	5	X	X				
		14:53	G	PT-UV17-S10D	2	X					
		14:30	G	PT-UV16-S10	5	X	X				
		14:30	G	PT-UV16-S10D	2	X					
		11:30	G	PT-UV5-S10	5	X	X				
		11:30	G	PT-UV5-S10D	2	X					
		14:04	G	PT-UV6-S10	5	X	X				
		14:04	G	PT-UV6-S10D	2	X					
		10:45	G	PT-UV4-S10	5	X	X				
		10:45	G	PT-UV4-S10D	5	X	X				

RELINQUISHED BY <i>AK</i>	DATE / TIME 10/4/23 1:30	RECEIVED BY <i>[Signature]</i>	DATE / TIME 10-04-23 1:30	SAMPLE CONDITION: Actual Temperature: 5.0 T-0291	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/04/23 3:04 PM	RECEIVED BY <i>[Signature]</i>	DATE / TIME 10/4/23 15:10	Received On Ice Preserved Evidence Seals Present Container Attached Preserved at Lab	
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.

Client version 04132016



Sample Receipt Checklist

Weck WKO: 3J06135 Date/Time Received: 10/04/23 15:10
 WKO Logged by: Jaime Gomez # of Samples: 10
 Samples Checked by: Jaime Gomez Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		5.0 °C
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, if Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>		CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by: _____ Date: 10/06/23
 Signature: Jaime Gomez

Work Orders: 3J06137

Report Date: 10/18/2023

Project: COSM 97-005

Received Date: 10/04/2023

Turnaround Time: 5 workdays

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/04/23 with the Chain-of-Custody document. The samples were received in good condition, at 5.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
10/18/2023 17:39

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV17-S9	Client	3J06137-01	Water	10/03/23 14:53	
PT-UV17-S9D	Client	3J06137-02	Water	10/03/23 14:53	
PT-UV16-S9	Client	3J06137-03	Water	10/03/23 14:30	
PT-UV16-S9D	Client	3J06137-04	Water	10/03/23 14:30	
PT-UV5-S9D	Client	3J06137-05	Water	10/03/23 11:30	
PT-UV5-S9	Client	3J06137-06	Water	10/03/23 11:30	
PT-UV6-S9	Client	3J06137-07	Water	10/03/23 14:04	
PT-UV6-S9D	Client	3J06137-08	Water	10/03/23 14:04	
PT-UV4-S9	Client	3J06137-09	Water	10/03/23 10:45	
PT-UV4-S9D	Client	3J06137-10	Water	10/03/23 10:45	
Field Blank	Client	3J06137-11	Water	10/03/23 16:09	
Trip Blank	Client	3J06137-12	Water	10/03/23 16:09	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV17-S9
3J06137-01 (Water) Sampled: 10/03/23 14:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	0.56	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	2.4	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.55	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.2	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	1.2	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV17-S9
3J06137-01 (Water) Sampled: 10/03/23 14:53 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	13	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.2		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	30	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	94%	Conc: 46.9	70-130			10/10/23	
4-Bromofluorobenzene	94%	Conc: 46.9	70-130			10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV17-S9
3J06137-01RE1 (Water) Sampled: 10/03/23 14:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	85	1.4	3.5	ug/l	50	10/11/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	99%	Conc: 10.1	70-130			10/11/23	

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2							
Batch ID: W3J0916			Preparation: EPA 5030B			Instr: GCMS08	
				Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.79	0.23	0.50	ug/l	1	10/11/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	85%	Conc: 42.4	70-130			10/11/23	
4-Bromofluorobenzene	87%	Conc: 43.6	70-130			10/11/23	

Sample Results

(Continued)

Sample: PT-UV17-S9D
3J06137-02RE1 (Water) Sampled: 10/03/23 14:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	90	1.4	3.5	ug/l	50	10/11/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	104%	Conc: 10.7	70-130			10/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV16-S9
3J06137-03 (Water) Sampled: 10/03/23 14:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	0.50	0.27	0.50	ug/l	1	10/10/23	J
1,1-Dichloroethene	2.2	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.49	0.27	0.50	ug/l	1	10/10/23	J
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.0	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	1.2	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV16-S9
3J06137-03 (Water) Sampled: 10/03/23 14:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	11	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.0		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	28	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	93%	Conc: 46.5	70-130	10/10/23
4-Bromofluorobenzene	91%	Conc: 45.5	70-130	10/10/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV16-S9
3J06137-03RE1 (Water) Sampled: 10/03/23 14:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	390	2.8	7.0	ug/l	100	10/11/23	M-06
Surrogate(s)							
1,4-Dioxane-d8	112%	Conc: 10.7	70-130			10/11/23	

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2							
Batch ID: W3J0916			Instr: GCMS08				
Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM			
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.53	0.23	0.50	ug/l	1	10/11/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
Surrogate(s)							
1,2-Dichlorobenzene-d4	84%	Conc: 42.1	70-130			10/11/23	
4-Bromofluorobenzene	87%	Conc: 43.3	70-130			10/11/23	

Sample Results

(Continued)

Sample: PT-UV16-S9D
3J06137-04RE1 (Water) Sampled: 10/03/23 14:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	390	2.8	7.0	ug/l	100	10/11/23	M-06
Surrogate(s)							
1,4-Dioxane-d8	101%	Conc: 10.1	70-130			10/11/23	

Sample Results

(Continued)

Sample: PT-UV5-S9D
3J06137-05RE1 (Water) Sampled: 10/03/23 11:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	240	2.8	7.0	ug/l	100	10/11/23	M-06
Surrogate(s)							
1,4-Dioxane-d8	102%	Conc: 10.3	70-130			10/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV5-S9
3J06137-06 (Water) Sampled: 10/03/23 11:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	0.46	0.27	0.50	ug/l	1	10/10/23	J
1,1-Dichloroethene	2.1	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.50	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.0	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	1.0	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV5-S9
3J06137-06 (Water) Sampled: 10/03/23 11:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	11	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.0		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	27	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	87%	Conc: 43.5	70-130	10/10/23
4-Bromofluorobenzene	87%	Conc: 43.3	70-130	10/10/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV5-S9
3J06137-06RE1 (Water) Sampled: 10/03/23 11:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	290	2.8	7.0	ug/l	100	10/11/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	104%	Conc: 10.4	70-130			10/11/23	

Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.39	0.23	0.50	ug/l	1	10/11/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	89%	Conc: 44.5	70-130			10/11/23	
4-Bromofluorobenzene	91%	Conc: 45.4	70-130			10/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV6-S9
3J06137-07 (Water) Sampled: 10/03/23 14:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	0.44	0.27	0.50	ug/l	1	10/10/23	J
1,1-Dichloroethene	2.5	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.46	0.27	0.50	ug/l	1	10/10/23	J
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.1	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	1.1	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV6-S9
3J06137-07 (Water) Sampled: 10/03/23 14:04 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	12	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.1		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	27	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	90%	Conc: 45.2	70-130	10/10/23
4-Bromofluorobenzene	88%	Conc: 44.0	70-130	10/10/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV6-S9
3J06137-07RE1 (Water) Sampled: 10/03/23 14:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	370	2.8	7.0	ug/l	100	10/11/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	98%	Conc: 9.83	70-130			10/11/23	

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.31	0.23	0.50	ug/l	1	10/11/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	89%	Conc: 44.5	70-130			10/11/23	
4-Bromofluorobenzene	91%	Conc: 45.4	70-130			10/11/23	

Sample Results

(Continued)

Sample: PT-UV6-S9D
3J06137-08RE1 (Water) Sampled: 10/03/23 14:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	370	2.8	7.0	ug/l	100	10/11/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	102%	Conc: 10.1	70-130			10/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S9
3J06137-09 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	0.49	0.27	0.50	ug/l	1	10/10/23	J
1,1-Dichloroethene	2.6	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	0.55	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	4.2	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	1.1	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S9
3J06137-09 (Water) Sampled: 10/03/23 10:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	13	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	4.2		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	29	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	90%	Conc: 45.0	70-130			10/10/23	
4-Bromofluorobenzene	87%	Conc: 43.7	70-130			10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV4-S9
3J06137-09RE1 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	330	2.8	7.0	ug/l	100	10/11/23	M-06
Surrogate(s)							
1,4-Dioxane-d8	92%	Conc: 9.33	70-130			10/11/23	

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2							
Batch ID: W3J0916			Instr: GCMS08				
Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM			
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.48	0.23	0.50	ug/l	1	10/11/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
Surrogate(s)							
1,2-Dichlorobenzene-d4	90%	Conc: 45.2	70-130			10/11/23	
4-Bromofluorobenzene	92%	Conc: 45.8	70-130			10/11/23	

Sample Results

(Continued)

Sample: PT-UV4-S9D
3J06137-10RE1 (Water) Sampled: 10/03/23 10:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	340	2.8	7.0	ug/l	100	10/11/23	M-06
Surrogate(s)							
1,4-Dioxane-d8	94%	Conc: 9.35	70-130			10/11/23	

Sample Results

(Continued)

Sample: Field Blank
3J06137-11 (Water) Sampled: 10/03/23 16:09 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0649		Preparation: EPA 522/SPE		Prepared: 10/09/23 08:22		Analyst: mld	
1,4-Dioxane	0.39	0.028	0.070	ug/l	1	10/11/23	
Surrogate(s)							
1,4-Dioxane-d8	130%	Conc: 13.1	70-130			10/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank
3J06137-12 (Water) Sampled: 10/03/23 16:09 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	620	3.1	5.0	ug/l	1	10/10/23	E-01
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/10/23	Q-11
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/10/23	Q-11
Chloroform	ND	0.27	0.50	ug/l	1	10/10/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/10/23	Q-11

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank
3J06137-12 (Water) Sampled: 10/03/23 16:09 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	ND		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/10/23	Q-11
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/18/2023 17:39

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: Trip Blank
 3J06137-12 (Water) Sampled: 10/03/23 16:09 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 46.0	70-130			10/10/23	
4-Bromofluorobenzene	87%	Conc: 43.7	70-130			10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0649 - EPA 522											
Blank (W3J0649-BLK1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,4-Dioxane	ND	0.028	0.070	ug/l							B-02
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.59			ug/l	10.0		86	70-130			
LCS (W3J0649-BS1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,4-Dioxane	0.348	0.028	0.070	ug/l	0.400		87	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.62			ug/l	10.0		86	70-130			
LCS Dup (W3J0649-BSD1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,4-Dioxane	0.411	0.028	0.070	ug/l	0.400		103	70-130	17	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.9			ug/l	10.0		109	70-130			

Quality Control Results

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2											
Blank (W3J0661-BLK1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
Blank (W3J0661-BLK1)					Prepared: 10/09/23 Analyzed: 10/10/23						
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
Blank (W3J0661-BLK1)						Prepared: 10/09/23 Analyzed: 10/10/23					
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	47.7			ug/l	50.0		95	70-130			
4-Bromofluorobenzene	43.8			ug/l	50.0		88	70-130			
LCS (W3J0661-BS1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,1,2-Tetrachloroethane	4.38	0.24	0.50	ug/l	5.00		88	70-130			
1,1,1-Trichloroethane	5.43	0.26	0.50	ug/l	5.00		109	70-130			
1,1,2,2-Tetrachloroethane	4.57	0.20	0.50	ug/l	5.00		91	70-130			
1,1,2-Trichloroethane	4.78	0.19	0.50	ug/l	5.00		96	70-130			
1,1-Dichloroethane	5.97	0.27	0.50	ug/l	5.00		119	70-130			
1,1-Dichloroethene	3.87	0.16	0.50	ug/l	5.00		77	70-130			
1,1-Dichloropropene	3.96	0.14	0.50	ug/l	5.00		79	70-130			
1,2,3-Trichlorobenzene	4.20	0.40	0.50	ug/l	5.00		84	70-130			
1,2,3-Trichloropropane	4.67	0.22	0.50	ug/l	5.00		93	70-130			
1,2,4-Trichlorobenzene	4.13	0.17	0.50	ug/l	5.00		83	70-130			
1,2,4-Trimethylbenzene	5.02	0.20	0.50	ug/l	5.00		100	70-130			
1,2-Dichloroethane	4.86	0.24	0.50	ug/l	5.00		97	70-130			
1,2-Dichloropropane	4.68	0.13	0.50	ug/l	5.00		94	70-130			
1,3,5-Trimethylbenzene	5.00	0.17	0.50	ug/l	5.00		100	70-130			
1,3-Dichloropropane	4.83	0.27	0.50	ug/l	5.00		97	70-130			
2,2-Dichloropropane	5.40	0.17	0.50	ug/l	5.00		108	70-130			
2-Butanone	6.97	1.5	5.0	ug/l	5.00		139	70-130			Q-08
2-Chlorotoluene	5.13	0.15	0.50	ug/l	5.00		103	70-130			
2-Hexanone	5.29	1.2	5.0	ug/l	5.00		106	70-130			
4-Chlorotoluene	5.12	0.15	0.50	ug/l	5.00		102	70-130			
4-Methyl-2-pentanone	5.04	1.8	5.0	ug/l	5.00		101	70-130			
Acetone	43.1	3.1	5.0	ug/l	50.0		86	70-130			
Benzene	4.67	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.42	0.15	0.50	ug/l	5.00		88	70-130			
Bromochloromethane	5.86	0.15	0.50	ug/l	5.00		117	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)										
LCS (W3J0661-BS1)					Prepared: 10/09/23 Analyzed: 10/10/23					
Bromodichloromethane	4.58	0.24	0.50	ug/l	5.00		92 70-130			
Bromoform	4.31	0.38	0.50	ug/l	5.00		86 70-130			
Bromomethane	3.11	0.27	0.50	ug/l	5.00		62 70-130			Q-11
Carbon Disulfide	3.39	0.25	0.50	ug/l	5.00		68 70-130			Q-11
Carbon tetrachloride	4.41	0.27	0.50	ug/l	5.00		88 70-130			
Chlorobenzene	4.66	0.15	0.50	ug/l	5.00		93 70-130			
Chloroethane	3.05	0.17	0.50	ug/l	5.00		61 70-130			Q-11
Chloroform	6.13	0.27	0.50	ug/l	5.00		123 70-130			
Chloromethane	4.13	0.23	0.50	ug/l	5.00		83 70-130			
cis-1,2-Dichloroethene	5.93	0.25	0.50	ug/l	5.00		119 70-130			
cis-1,3-Dichloropropene	4.02	0.30	0.50	ug/l	5.00		80 70-130			
Dibromochloromethane	4.59	0.20	0.50	ug/l	5.00		92 70-130			
Dibromomethane	4.93	0.20	0.50	ug/l	5.00		99 70-130			
Dichlorodifluoromethane (Freon 12)	4.50	0.45	0.50	ug/l	5.00		90 70-130			
Di-isopropyl ether	21.9	1.1	2.0	ug/l	20.0		110 70-130			
Ethyl tert-butyl ether	22.8	1.0	2.0	ug/l	20.0		114 70-130			
Ethylbenzene	4.54	0.21	0.50	ug/l	5.00		91 70-130			
Freon 113	3.76	1.5	5.0	ug/l	5.00		75 70-130			J
Hexachlorobutadiene	4.30	0.40	0.50	ug/l	5.00		86 70-130			
Isopropylbenzene	4.60	0.18	0.50	ug/l	5.00		92 70-130			
m,p-Xylene	4.58	0.33	0.50	ug/l	5.00		92 70-130			
m-Dichlorobenzene	5.22	0.14	0.50	ug/l	5.00		104 70-130			
Methyl tert-butyl ether (MTBE)	17.4	0.94	2.0	ug/l	20.0		87 70-130			
Methylene chloride	4.35	0.30	0.50	ug/l	5.00		87 70-130			
Naphthalene	4.27	0.35	0.50	ug/l	5.00		85 70-130			
n-Butylbenzene	4.94	0.29	0.50	ug/l	5.00		99 70-130			
n-Propylbenzene	5.52	0.18	0.50	ug/l	5.00		110 70-130			
o-Dichlorobenzene	5.36	0.19	0.50	ug/l	5.00		107 70-130			
o-Xylene	4.94	0.20	0.50	ug/l	5.00		99 70-130			
p-Dichlorobenzene	4.95	0.18	0.50	ug/l	5.00		99 70-130			
p-Isopropyltoluene	5.22	0.25	0.50	ug/l	5.00		104 70-130			
sec-Butylbenzene	5.27	0.24	0.50	ug/l	5.00		105 70-130			
Styrene	5.01	0.19	0.50	ug/l	5.00		100 70-130			
Tert-amyl methyl ether	20.2	0.59	2.0	ug/l	20.0		101 70-130			
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101 70-130			
Tetrachloroethene	4.00	0.18	0.50	ug/l	5.00		80 70-130			
Toluene	4.75	0.29	0.50	ug/l	5.00		95 70-130			
trans-1,2-Dichloroethene	4.32	0.26	0.50	ug/l	5.00		86 70-130			
trans-1,3-Dichloropropene	4.56	0.32	0.50	ug/l	5.00		91 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
LCS (W3J0661-BS1)						Prepared: 10/09/23 Analyzed: 10/10/23					
Trichloroethene	4.06	0.18	0.50	ug/l	5.00		81	70-130			
Trichlorofluoromethane	4.08	0.18	0.50	ug/l	5.00		82	70-130			
Vinyl chloride	3.81	0.18	0.50	ug/l	5.00		76	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	55.0			ug/l	50.0		110	70-130			
4-Bromofluorobenzene	48.2			ug/l	50.0		96	70-130			
LCS Dup (W3J0661-BSD1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,1,2-Tetrachloroethane	4.26	0.24	0.50	ug/l	5.00		85	70-130	3	30	
1,1,1-Trichloroethane	5.16	0.26	0.50	ug/l	5.00		103	70-130	5	30	
1,1,2,2-Tetrachloroethane	4.33	0.20	0.50	ug/l	5.00		87	70-130	5	30	
1,1,2-Trichloroethane	4.66	0.19	0.50	ug/l	5.00		93	70-130	2	30	
1,1-Dichloroethane	6.12	0.27	0.50	ug/l	5.00		122	70-130	3	30	
1,1-Dichloroethene	3.69	0.16	0.50	ug/l	5.00		74	70-130	5	30	
1,1-Dichloropropene	3.84	0.14	0.50	ug/l	5.00		77	70-130	3	30	
1,2,3-Trichlorobenzene	4.21	0.40	0.50	ug/l	5.00		84	70-130	0.3	30	
1,2,3-Trichloropropane	4.57	0.22	0.50	ug/l	5.00		91	70-130	2	30	
1,2,4-Trichlorobenzene	4.11	0.17	0.50	ug/l	5.00		82	70-130	0.4	30	
1,2,4-Trimethylbenzene	4.72	0.20	0.50	ug/l	5.00		94	70-130	6	30	
1,2-Dichloroethane	4.72	0.24	0.50	ug/l	5.00		94	70-130	3	30	
1,2-Dichloropropane	4.53	0.13	0.50	ug/l	5.00		91	70-130	3	30	
1,3,5-Trimethylbenzene	4.65	0.17	0.50	ug/l	5.00		93	70-130	7	30	
1,3-Dichloropropane	4.69	0.27	0.50	ug/l	5.00		94	70-130	3	30	
2,2-Dichloropropane	5.07	0.17	0.50	ug/l	5.00		101	70-130	6	30	
2-Butanone	6.93	1.5	5.0	ug/l	5.00		139	70-130	0.6	30	Q-08
2-Chlorotoluene	4.77	0.15	0.50	ug/l	5.00		95	70-130	7	30	
2-Hexanone	5.17	1.2	5.0	ug/l	5.00		103	70-130	2	30	
4-Chlorotoluene	4.78	0.15	0.50	ug/l	5.00		96	70-130	7	30	
4-Methyl-2-pentanone	4.92	1.8	5.0	ug/l	5.00		98	70-130	2	30	J
Acetone	43.8	3.1	5.0	ug/l	50.0		88	70-130	2	30	
Benzene	4.42	0.15	0.50	ug/l	5.00		88	70-130	6	30	
Bromobenzene	4.24	0.15	0.50	ug/l	5.00		85	70-130	4	30	
Bromochloromethane	5.57	0.15	0.50	ug/l	5.00		111	70-130	5	30	
Bromodichloromethane	4.54	0.24	0.50	ug/l	5.00		91	70-130	0.9	30	
Bromoform	4.12	0.38	0.50	ug/l	5.00		82	70-130	4	30	
Bromomethane	2.85	0.27	0.50	ug/l	5.00		57	70-130	9	30	Q-11
Carbon Disulfide	3.16	0.25	0.50	ug/l	5.00		63	70-130	7	30	Q-11
Carbon tetrachloride	4.25	0.27	0.50	ug/l	5.00		85	70-130	4	30	
Chlorobenzene	4.43	0.15	0.50	ug/l	5.00		89	70-130	5	30	
Chloroethane	2.87	0.17	0.50	ug/l	5.00		57	70-130	6	30	Q-11

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
LCS Dup (W3J0661-BSD1)						Prepared: 10/09/23 Analyzed: 10/10/23					
Chloroform	5.78	0.27	0.50	ug/l	5.00		116	70-130	6	30	
Chloromethane	4.33	0.23	0.50	ug/l	5.00		87	70-130	5	30	
cis-1,2-Dichloroethene	5.54	0.25	0.50	ug/l	5.00		111	70-130	7	30	
cis-1,3-Dichloropropene	3.91	0.30	0.50	ug/l	5.00		78	70-130	3	30	
Dibromochloromethane	4.51	0.20	0.50	ug/l	5.00		90	70-130	2	30	
Dibromomethane	4.74	0.20	0.50	ug/l	5.00		95	70-130	4	30	
Dichlorodifluoromethane (Freon 12)	4.54	0.45	0.50	ug/l	5.00		91	70-130	0.8	30	
Di-isopropyl ether	23.2	1.1	2.0	ug/l	20.0		116	70-130	6	30	
Ethyl tert-butyl ether	22.6	1.0	2.0	ug/l	20.0		113	70-130	1	30	
Ethylbenzene	4.26	0.21	0.50	ug/l	5.00		85	70-130	6	30	
Freon 113	3.57	1.5	5.0	ug/l	5.00		71	70-130	5	30	J
Hexachlorobutadiene	4.09	0.40	0.50	ug/l	5.00		82	70-130	5	30	
Isopropylbenzene	4.24	0.18	0.50	ug/l	5.00		85	70-130	8	30	
m,p-Xylene	4.25	0.33	0.50	ug/l	5.00		85	70-130	7	30	
m-Dichlorobenzene	4.98	0.14	0.50	ug/l	5.00		100	70-130	5	30	
Methyl tert-butyl ether (MTBE)	18.3	0.94	2.0	ug/l	20.0		92	70-130	5	30	
Methylene chloride	4.26	0.30	0.50	ug/l	5.00		85	70-130	2	30	
Naphthalene	4.20	0.35	0.50	ug/l	5.00		84	70-130	2	30	
n-Butylbenzene	4.65	0.29	0.50	ug/l	5.00		93	70-130	6	30	
n-Propylbenzene	5.13	0.18	0.50	ug/l	5.00		103	70-130	7	30	
o-Dichlorobenzene	5.10	0.19	0.50	ug/l	5.00		102	70-130	5	30	
o-Xylene	4.58	0.20	0.50	ug/l	5.00		92	70-130	7	30	
p-Dichlorobenzene	4.69	0.18	0.50	ug/l	5.00		94	70-130	5	30	
p-Isopropyltoluene	4.87	0.25	0.50	ug/l	5.00		97	70-130	7	30	
sec-Butylbenzene	4.88	0.24	0.50	ug/l	5.00		98	70-130	8	30	
Styrene	4.67	0.19	0.50	ug/l	5.00		93	70-130	7	30	
Tert-amyl methyl ether	19.9	0.59	2.0	ug/l	20.0		99	70-130	2	30	
tert-Butylbenzene	4.72	0.18	0.50	ug/l	5.00		94	70-130	7	30	
Tetrachloroethene	3.86	0.18	0.50	ug/l	5.00		77	70-130	3	30	
Toluene	4.56	0.29	0.50	ug/l	5.00		91	70-130	4	30	
trans-1,2-Dichloroethene	4.28	0.26	0.50	ug/l	5.00		86	70-130	1	30	
trans-1,3-Dichloropropene	4.44	0.32	0.50	ug/l	5.00		89	70-130	3	30	
Trichloroethene	3.88	0.18	0.50	ug/l	5.00		78	70-130	4	30	
Trichlorofluoromethane	3.84	0.18	0.50	ug/l	5.00		77	70-130	6	30	
Vinyl chloride	3.74	0.18	0.50	ug/l	5.00		75	70-130	2	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.1			ug/l	50.0		108	70-130			
4-Bromofluorobenzene	47.6			ug/l	50.0		95	70-130			

Batch: W3J0916 - EPA 524.2

3J06137

Page 26 of 34

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
Blank (W3J0916-BLK1)						Prepared & Analyzed: 10/11/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
Blank (W3J0916-BLK1)						Prepared & Analyzed: 10/11/23					
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.2			ug/l	50.0		88	70-130			
4-Bromofluorobenzene	45.1			ug/l	50.0		90	70-130			
LCS (W3J0916-BS1)						Prepared & Analyzed: 10/11/23					
1,1,1,2-Tetrachloroethane	5.04	0.24	0.50	ug/l	5.00		101	70-130			
1,1,1-Trichloroethane	4.58	0.26	0.50	ug/l	5.00		92	70-130			
1,1,2,2-Tetrachloroethane	4.75	0.20	0.50	ug/l	5.00		95	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
LCS (W3J0916-BS1)					Prepared & Analyzed: 10/11/23						
1,1,2-Trichloroethane	4.98	0.19	0.50	ug/l	5.00		100	70-130			
1,1-Dichloroethane	5.32	0.27	0.50	ug/l	5.00		106	70-130			
1,1-Dichloroethene	5.28	0.16	0.50	ug/l	5.00		106	70-130			
1,1-Dichloropropene	4.98	0.14	0.50	ug/l	5.00		100	70-130			
1,2,3-Trichlorobenzene	4.41	0.40	0.50	ug/l	5.00		88	70-130			
1,2,3-Trichloropropane	4.78	0.22	0.50	ug/l	5.00		96	70-130			
1,2,4-Trichlorobenzene	4.74	0.17	0.50	ug/l	5.00		95	70-130			
1,2,4-Trimethylbenzene	4.84	0.20	0.50	ug/l	5.00		97	70-130			
1,2-Dichloroethane	4.87	0.24	0.50	ug/l	5.00		97	70-130			
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00		95	70-130			
1,3,5-Trimethylbenzene	4.77	0.17	0.50	ug/l	5.00		95	70-130			
1,3-Dichloropropane	5.05	0.27	0.50	ug/l	5.00		101	70-130			J
2,2-Dichloropropane	5.10	0.17	0.50	ug/l	5.00		102	70-130			
2-Butanone	5.19	1.5	5.0	ug/l	5.00		104	70-130			
2-Chlorotoluene	4.65	0.15	0.50	ug/l	5.00		93	70-130			
2-Hexanone	4.80	1.2	5.0	ug/l	5.00		96	70-130			J
4-Chlorotoluene	4.54	0.15	0.50	ug/l	5.00		91	70-130			
4-Methyl-2-pentanone	4.63	1.8	5.0	ug/l	5.00		93	70-130			J
Acetone	53.7	3.1	5.0	ug/l	50.0		107	70-130			
Benzene	4.77	0.15	0.50	ug/l	5.00		95	70-130			
Bromobenzene	4.79	0.15	0.50	ug/l	5.00		96	70-130			
Bromochloromethane	4.90	0.15	0.50	ug/l	5.00		98	70-130			
Bromodichloromethane	4.78	0.24	0.50	ug/l	5.00		96	70-130			
Bromoform	4.65	0.38	0.50	ug/l	5.00		93	70-130			
Bromomethane	4.60	0.27	0.50	ug/l	5.00		92	70-130			
Carbon Disulfide	5.16	0.25	0.50	ug/l	5.00		103	70-130			
Carbon tetrachloride	4.88	0.27	0.50	ug/l	5.00		98	70-130			
Chlorobenzene	4.94	0.15	0.50	ug/l	5.00		99	70-130			
Chloroethane	4.48	0.17	0.50	ug/l	5.00		90	70-130			
Chloroform	4.99	0.27	0.50	ug/l	5.00		100	70-130			
Chloromethane	4.76	0.23	0.50	ug/l	5.00		95	70-130			
cis-1,2-Dichloroethene	5.24	0.25	0.50	ug/l	5.00		105	70-130			
cis-1,3-Dichloropropene	4.63	0.30	0.50	ug/l	5.00		93	70-130			
Dibromochloromethane	4.74	0.20	0.50	ug/l	5.00		95	70-130			
Dibromomethane	4.79	0.20	0.50	ug/l	5.00		96	70-130			
Dichlorodifluoromethane (Freon 12)	4.47	0.45	0.50	ug/l	5.00		89	70-130			
Di-isopropyl ether	24.7	1.1	2.0	ug/l	20.0		124	70-130			
Ethyl tert-butyl ether	22.6	1.0	2.0	ug/l	20.0		113	70-130			
Ethylbenzene	4.56	0.21	0.50	ug/l	5.00		91	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)										
LCS (W3J0916-BS1)					Prepared & Analyzed: 10/11/23					
Freon 113	5.28	1.5	5.0	ug/l	5.00		106 70-130			
Hexachlorobutadiene	4.47	0.40	0.50	ug/l	5.00		89 70-130			
Isopropylbenzene	4.59	0.18	0.50	ug/l	5.00		92 70-130			
m,p-Xylene	4.70	0.33	0.50	ug/l	5.00		94 70-130			
m-Dichlorobenzene	4.64	0.14	0.50	ug/l	5.00		93 70-130			
Methyl tert-butyl ether (MTBE)	21.9	0.94	2.0	ug/l	20.0		109 70-130			
Methylene chloride	5.28	0.30	0.50	ug/l	5.00		106 70-130			
Naphthalene	4.66	0.35	0.50	ug/l	5.00		93 70-130			
n-Butylbenzene	4.62	0.29	0.50	ug/l	5.00		92 70-130			
n-Propylbenzene	4.75	0.18	0.50	ug/l	5.00		95 70-130			
o-Dichlorobenzene	5.11	0.19	0.50	ug/l	5.00		102 70-130			
o-Xylene	4.85	0.20	0.50	ug/l	5.00		97 70-130			
p-Dichlorobenzene	5.11	0.18	0.50	ug/l	5.00		102 70-130			
p-Isopropyltoluene	4.78	0.25	0.50	ug/l	5.00		96 70-130			
sec-Butylbenzene	4.71	0.24	0.50	ug/l	5.00		94 70-130			
Styrene	4.81	0.19	0.50	ug/l	5.00		96 70-130			
Tert-amyl methyl ether	20.4	0.59	2.0	ug/l	20.0		102 70-130			
tert-Butylbenzene	4.57	0.18	0.50	ug/l	5.00		91 70-130			
Tetrachloroethene	4.64	0.18	0.50	ug/l	5.00		93 70-130			
Toluene	5.09	0.29	0.50	ug/l	5.00		102 70-130			
trans-1,2-Dichloroethene	5.28	0.26	0.50	ug/l	5.00		106 70-130			
trans-1,3-Dichloropropene	4.93	0.32	0.50	ug/l	5.00		99 70-130			
Trichloroethene	4.44	0.18	0.50	ug/l	5.00		89 70-130			
Trichlorofluoromethane	5.72	0.18	0.50	ug/l	5.00		114 70-130			
Vinyl chloride	4.48	0.18	0.50	ug/l	5.00		90 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109 70-130			
4-Bromofluorobenzene	53.7			ug/l	50.0		107 70-130			
LCS Dup (W3J0916-BSD1)					Prepared & Analyzed: 10/11/23					
1,1,1,2-Tetrachloroethane	4.83	0.24	0.50	ug/l	5.00		97 70-130	4	30	
1,1,1-Trichloroethane	4.63	0.26	0.50	ug/l	5.00		93 70-130	1	30	
1,1,2,2-Tetrachloroethane	5.02	0.20	0.50	ug/l	5.00		100 70-130	6	30	
1,1,2-Trichloroethane	4.90	0.19	0.50	ug/l	5.00		98 70-130	1	30	
1,1-Dichloroethane	4.58	0.27	0.50	ug/l	5.00		92 70-130	15	30	
1,1-Dichloroethene	4.82	0.16	0.50	ug/l	5.00		96 70-130	9	30	
1,1-Dichloropropene	4.48	0.14	0.50	ug/l	5.00		90 70-130	11	30	
1,2,3-Trichlorobenzene	4.73	0.40	0.50	ug/l	5.00		95 70-130	7	30	
1,2,3-Trichloropropane	5.04	0.22	0.50	ug/l	5.00		101 70-130	5	30	
1,2,4-Trichlorobenzene	5.09	0.17	0.50	ug/l	5.00		102 70-130	7	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
LCS Dup (W3J0916-BSD1)					Prepared & Analyzed: 10/11/23						
1,2,4-Trimethylbenzene	4.71	0.20	0.50	ug/l	5.00		94	70-130	3	30	
1,2-Dichloroethane	4.49	0.24	0.50	ug/l	5.00		90	70-130	8	30	
1,2-Dichloropropane	4.51	0.13	0.50	ug/l	5.00		90	70-130	5	30	
1,3,5-Trimethylbenzene	4.57	0.17	0.50	ug/l	5.00		91	70-130	4	30	
1,3-Dichloropropane	4.91	0.27	0.50	ug/l	5.00		98	70-130	3	30	
2,2-Dichloropropane	4.58	0.17	0.50	ug/l	5.00		92	70-130	11	30	
2-Butanone	4.37	1.5	5.0	ug/l	5.00		87	70-130	17	30	J
2-Chlorotoluene	4.44	0.15	0.50	ug/l	5.00		89	70-130	5	30	
2-Hexanone	4.70	1.2	5.0	ug/l	5.00		94	70-130	2	30	J
4-Chlorotoluene	4.35	0.15	0.50	ug/l	5.00		87	70-130	4	30	
4-Methyl-2-pentanone	4.50	1.8	5.0	ug/l	5.00		90	70-130	3	30	J
Acetone	51.7	3.1	5.0	ug/l	50.0		103	70-130	4	30	
Benzene	4.46	0.15	0.50	ug/l	5.00		89	70-130	7	30	
Bromobenzene	4.68	0.15	0.50	ug/l	5.00		94	70-130	2	30	
Bromochloromethane	4.61	0.15	0.50	ug/l	5.00		92	70-130	6	30	
Bromodichloromethane	4.47	0.24	0.50	ug/l	5.00		89	70-130	7	30	
Bromoform	4.52	0.38	0.50	ug/l	5.00		90	70-130	3	30	
Bromomethane	7.45	0.27	0.50	ug/l	5.00		149	70-130	47	30	A-01, Q-08
Carbon Disulfide	4.58	0.25	0.50	ug/l	5.00		92	70-130	12	30	
Carbon tetrachloride	4.30	0.27	0.50	ug/l	5.00		86	70-130	12	30	
Chlorobenzene	4.72	0.15	0.50	ug/l	5.00		94	70-130	5	30	
Chloroethane	7.12	0.17	0.50	ug/l	5.00		142	70-130	46	30	A-01, Q-08
Chloroform	4.51	0.27	0.50	ug/l	5.00		90	70-130	10	30	
Chloromethane	5.67	0.23	0.50	ug/l	5.00		113	70-130	18	30	
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00		91	70-130	14	30	
cis-1,3-Dichloropropene	4.32	0.30	0.50	ug/l	5.00		86	70-130	7	30	
Dibromochloromethane	4.52	0.20	0.50	ug/l	5.00		90	70-130	5	30	
Dibromomethane	4.58	0.20	0.50	ug/l	5.00		92	70-130	4	30	
Dichlorodifluoromethane (Freon 12)	4.48	0.45	0.50	ug/l	5.00		90	70-130	0.2	30	
Di-isopropyl ether	22.2	1.1	2.0	ug/l	20.0		111	70-130	10	30	
Ethyl tert-butyl ether	21.8	1.0	2.0	ug/l	20.0		109	70-130	3	30	
Ethylbenzene	4.21	0.21	0.50	ug/l	5.00		84	70-130	8	30	
Freon 113	4.72	1.5	5.0	ug/l	5.00		94	70-130	11	30	J
Hexachlorobutadiene	4.28	0.40	0.50	ug/l	5.00		86	70-130	4	30	
Isopropylbenzene	4.32	0.18	0.50	ug/l	5.00		86	70-130	6	30	
m,p-Xylene	4.36	0.33	0.50	ug/l	5.00		87	70-130	8	30	
m-Dichlorobenzene	4.51	0.14	0.50	ug/l	5.00		90	70-130	3	30	
Methyl tert-butyl ether (MTBE)	21.0	0.94	2.0	ug/l	20.0		105	70-130	4	30	
Methylene chloride	4.61	0.30	0.50	ug/l	5.00		92	70-130	14	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/18/2023 17:39

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
LCS Dup (W3J0916-BSD1)					Prepared & Analyzed: 10/11/23						
Naphthalene	4.81	0.35	0.50	ug/l	5.00		96	70-130	3	30	
n-Butylbenzene	4.44	0.29	0.50	ug/l	5.00		89	70-130	4	30	
n-Propylbenzene	4.43	0.18	0.50	ug/l	5.00		89	70-130	7	30	
o-Dichlorobenzene	4.99	0.19	0.50	ug/l	5.00		100	70-130	2	30	
o-Xylene	4.63	0.20	0.50	ug/l	5.00		93	70-130	4	30	
p-Dichlorobenzene	4.97	0.18	0.50	ug/l	5.00		99	70-130	3	30	
p-Isopropyltoluene	4.52	0.25	0.50	ug/l	5.00		90	70-130	6	30	
sec-Butylbenzene	4.35	0.24	0.50	ug/l	5.00		87	70-130	8	30	
Styrene	4.59	0.19	0.50	ug/l	5.00		92	70-130	5	30	
Tert-amyl methyl ether	21.6	0.59	2.0	ug/l	20.0		108	70-130	6	30	
tert-Butylbenzene	4.33	0.18	0.50	ug/l	5.00		87	70-130	5	30	
Tetrachloroethene	4.20	0.18	0.50	ug/l	5.00		84	70-130	10	30	
Toluene	4.81	0.29	0.50	ug/l	5.00		96	70-130	6	30	
trans-1,2-Dichloroethene	4.50	0.26	0.50	ug/l	5.00		90	70-130	16	30	
trans-1,3-Dichloropropene	4.81	0.32	0.50	ug/l	5.00		96	70-130	2	30	
Trichloroethene	4.16	0.18	0.50	ug/l	5.00		83	70-130	7	30	
Trichlorofluoromethane	5.45	0.18	0.50	ug/l	5.00		109	70-130	5	30	
Vinyl chloride	5.95	0.18	0.50	ug/l	5.00		119	70-130	28	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.6			ug/l	50.0		105	70-130			
4-Bromofluorobenzene	51.5			ug/l	50.0		103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/18/2023 17:39

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
A-01	The RPD results exceeded the QC control limits. The batch was accepted based on acceptable BS recovery.
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
E-01	The concentration indicated for this analyte is an estimated value above the calibration range.
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
Q-11	This analyte is low bias in QC samples, sample result is suspect.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3506137**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED						SPECIAL HANDLING											
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindfe@BrwnCaid.com		<table border="1"> <tr> <td>EPA 522 1,4-dioxane</td> <td>EPA 524.2 VOCs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						EPA 522 1,4-dioxane	EPA 524.2 VOCs									<ul style="list-style-type: none"> <input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package 	
EPA 522 1,4-dioxane	EPA 524.2 VOCs																				
PROJECT MANAGER Chris Kindle		SAMPLER invoice to Rose Ford, Rford@BrwnCaid.com		Charges will apply for weekends/holidays		Method of Shipment:		COMMENTS													

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP. TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs											
	10/3/23	14:53	G	PT-UV17-89 ✓	5	X	X											
	10/3/23	14:53	G	PT-UV17-89D ✓	2	X												
	10/3/23	14:30	G	PT-UV16-89 ✓	5	X	X											
	10/3/23	14:30	G	PT-UV16-89D ✓	2	X												
	10/3/23	11:30	G	PT-UV5-89D ✓	2	X												
	10/3/23	11:30	G	PT-UV5-89 ✓	5	X	X											
	10/3/23	14:04	G	PT-UV6-89 ✓	5	X	X											
	10/3/23	14:04	G	PT-UV6-89D ✓	2	X												
	10/3/23	10:45	G	PT-UV4-89 ✓	5	X	X											
	10/3/23	10:45	G	PT-UV4-89D ✓	2	X												
	10/3/23	16:09	G	Field Blank	2	X												
	10/3/23	16:09	G	Trip Blank	1		X											

RELINQUISHED BY 	DATE / TIME 10/4/23 1:30	RECEIVED BY 	10-04-23 1:30	SAMPLE CONDITION: Actual Temperature: 5.0 T-0291 <input type="checkbox"/> Received On Ice <input type="checkbox"/> Preserved <input type="checkbox"/> Evidence Seals Present <input type="checkbox"/> Container Attacked <input type="checkbox"/> Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY 	DATE / TIME 10/4/23 3:10 PM	RECEIVED BY 	10/4/23 15:10		
RELINQUISHED BY 	DATE / TIME	RECEIVED BY			

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.

GLC version 04/11/2010



Sample Receipt Checklist

Weck WKO: **3106137**

Date/Time Received: **10/04/23 15:10**

WKO Logged by: **Jaime Gomez**

of Samples: **12**

Samples Checked by: **Jaime Gomez**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
ice Type (Blue/Wet)				5.0 °C
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>		CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Ami added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: **10/06/23**

Work Orders: 3J06140

Report Date: 11/20/2023

Project: COSM 97-005

Received Date: 10/6/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/06/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GAC6-S11	Client	3J06140-01	Water	10/03/23 15:04	
PT-GAC17-S11	Client	3J06140-02	Water	10/03/23 15:53	
PT-GAC16-S23	Client	3J06140-03	Water	10/03/23 15:10	
PT-GAC6-S23	Client	3J06140-04	Water	10/03/23 14:39	
PT-GAC5-S23	Client	3J06140-05	Water	10/03/23 12:05	
PT-GAC4-S11	Client	3J06140-06	Water	10/03/23 11:45	
PT-GAC16-S11	Client	3J06140-07	Water	10/03/23 15:35	
PT-GAC5-S11	Client	3J06140-08	Water	10/03/23 12:30	
PT-GAC17-S23	Client	3J06140-09	Water	10/03/23 15:28	
PT-GAC4-S11D	Client	3J06140-10	Water	10/03/23 11:45	
PT-GAC4-S23D	Client	3J06140-11	Water	10/03/23 11:20	
PT-GAC4-S23	Client	3J06140-12	Water	10/03/23 11:20	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFOA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GAC6-S11
3J06140-01 (Water) Sampled: 10/03/23 15:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12	
Batch ID: W3J0657	Preparation: EPA 5030B	Prepared: 10/09/23 08:37	Analyst: ADM
1,2,3-Trichloropropane	ND	0.0012	0.0050 ug/l 1 10/11/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06	
Batch ID: W3J1268	Preparation: EPA 537/SPE	Prepared: 10/15/23 08:11	Analyst: jna
11CI-PF3OUdS	ND	0.47	1.7 ng/l 1 10/18/23
9CI-PF3ONS	ND	0.44	1.7 ng/l 1 10/18/23
ADONA	ND	0.46	1.7 ng/l 1 10/18/23
EtFOSAA	ND	0.40	1.7 ng/l 1 10/18/23
HFPO-DA	ND	0.72	1.7 ng/l 1 10/18/23
MeFOSAA	ND	0.48	1.7 ng/l 1 10/18/23
PFBS	ND	0.48	1.7 ng/l 1 10/18/23
PFDA	ND	0.38	1.7 ng/l 1 10/18/23
PFDoA	ND	0.54	1.7 ng/l 1 10/18/23
PFHpA	ND	0.44	1.7 ng/l 1 10/18/23
PFHxA	ND	0.40	1.7 ng/l 1 10/18/23
PFHxS	ND	0.49	1.7 ng/l 1 10/18/23
PFNA	ND	0.43	1.7 ng/l 1 10/18/23
PFOA	ND	0.55	1.7 ng/l 1 10/18/23
PFOS	ND	0.44	1.7 ng/l 1 10/18/23
PFTeDA	ND	0.38	1.7 ng/l 1 10/18/23
PFTTrDA	ND	0.35	1.7 ng/l 1 10/18/23
PFUnA	ND	0.40	1.7 ng/l 1 10/18/23

Surrogate(s)

13C2-PFDA	103%	Conc: 34.3	70-130	10/18/23
13C2-PFHxA	101%	Conc: 33.4	70-130	10/18/23
d5-EtFOSAA	110%	Conc: 146	70-130	10/18/23
HFPO-DA-13C3	100%	Conc: 33.3	70-130	10/18/23

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2		Instr: GCMS08	
Batch ID: W3J0661	Preparation: EPA 5030B	Prepared: 10/09/23 08:43	Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50 ug/l 1 10/10/23
1,1,1-Trichloroethane	ND	0.26	0.50 ug/l 1 10/10/23
1,1,2,2-Tetrachloroethane	ND	0.20	0.50 ug/l 1 10/10/23
1,1,2-Trichloroethane	ND	0.19	0.50 ug/l 1 10/10/23
1,1-Dichloroethane	ND	0.27	0.50 ug/l 1 10/10/23
1,1-Dichloroethene	ND	0.16	0.50 ug/l 1 10/10/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC6-S11
3J06140-01 (Water) Sampled: 10/03/23 15:04 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43			Analyst: ADM
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC6-S11
3J06140-01 (Water) Sampled: 10/03/23 15:04 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	ND		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	96%	Conc: 47.8	70-130			10/10/23	
4-Bromofluorobenzene	93%	Conc: 46.5	70-130			10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC6-S11
3J06140-01RE1 (Water) Sampled: 10/03/23 15:04 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J1184		Preparation: EPA 522/SPE		Prepared: 10/13/23 07:59		Analyst: mld	
1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/18/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	98%	Conc: 9.87	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.47	0.23	0.50	ug/l	1	10/11/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	86%	Conc: 43.0	70-130			10/11/23	
4-Bromofluorobenzene	89%	Conc: 44.5	70-130			10/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC17-S11
3J06140-02 (Water) Sampled: 10/03/23 15:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0649 **Prepared:** 10/09/23 08:22
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	120%	Conc: 12.4	70-130			10/11/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0657 **Prepared:** 10/09/23 08:37
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1268 **Prepared:** 10/15/23 08:11
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.46	1.6	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.43	1.6	ng/l	1	10/18/23	
ADONA	ND	0.45	1.6	ng/l	1	10/18/23	
EtFOSAA	ND	0.39	1.6	ng/l	1	10/18/23	
HFPO-DA	ND	0.71	1.6	ng/l	1	10/18/23	
MeFOSAA	ND	0.47	1.6	ng/l	1	10/18/23	
PFBS	ND	0.47	1.6	ng/l	1	10/18/23	
PFDA	ND	0.37	1.6	ng/l	1	10/18/23	
PFDaA	ND	0.53	1.6	ng/l	1	10/18/23	
PFHpA	ND	0.44	1.6	ng/l	1	10/18/23	
PFHxA	ND	0.40	1.6	ng/l	1	10/18/23	
PFHxS	ND	0.48	1.6	ng/l	1	10/18/23	
PFNA	ND	0.42	1.6	ng/l	1	10/18/23	
PFOA	ND	0.54	1.6	ng/l	1	10/18/23	
PFOS	ND	0.43	1.6	ng/l	1	10/18/23	
PFTeDA	ND	0.37	1.6	ng/l	1	10/18/23	
PFTTrDA	ND	0.34	1.6	ng/l	1	10/18/23	
PFUnA	ND	0.39	1.6	ng/l	1	10/18/23	
<i>Surrogate(s)</i>							
13C2-PFDA	101%	Conc: 33.0	70-130			10/18/23	
13C2-PFHxA	99%	Conc: 32.2	70-130			10/18/23	
d5-EtFOSAA	109%	Conc: 142	70-130			10/18/23	
HFPO-DA-13C3	97%	Conc: 31.5	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0661 **Prepared:** 10/09/23 08:43
Preparation: EPA 5030B **Analyst:** ADM

3J06140

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC17-S11
3J06140-02 (Water) Sampled: 10/03/23 15:53 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC17-S11
3J06140-02 (Water) Sampled: 10/03/23 15:53 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	ND		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	93%	Conc: 46.7	70-130	10/10/23
4-Bromofluorobenzene	89%	Conc: 44.6	70-130	10/10/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC17-S11
 3J06140-02RE1 (Water) Sampled: 10/03/23 15:53 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0916		Preparation: EPA 5030B			Prepared: 10/11/23 12:04		Analyst: ADM
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.62	0.23	0.50	ug/l	1	10/11/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 42.1	70-130			10/11/23	
4-Bromofluorobenzene	90%	Conc: 45.0	70-130			10/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC16-S23
3J06140-03 (Water) Sampled: 10/03/23 15:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0649

Preparation: EPA 522/SPE

Prepared: 10/09/23 08:22

Analyst: mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	111%	Conc: 11.7	70-130			10/11/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W3J0657

Preparation: EPA 5030B

Prepared: 10/09/23 08:37

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1268

Preparation: EPA 537/SPE

Prepared: 10/15/23 08:11

Analyst: jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/18/23	
ADONA	ND	0.47	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.73	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.49	1.7	ng/l	1	10/18/23	
PFBS	ND	0.49	1.7	ng/l	1	10/18/23	
PFDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/18/23	
PFNA	ND	0.44	1.7	ng/l	1	10/18/23	
PFOA	ND	0.56	1.7	ng/l	1	10/18/23	
PFOS	ND	0.45	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	102%	Conc: 34.3	70-130			10/18/23	
13C2-PFHxA	102%	Conc: 34.5	70-130			10/18/23	
d5-EtFOSAA	112%	Conc: 151	70-130			10/18/23	
HFPO-DA-13C3	102%	Conc: 34.4	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

3J06140

Page 11 of 75

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC16-S23
3J06140-03 (Water) Sampled: 10/03/23 15:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	3.5	3.1	5.0	ug/l	1	10/10/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC16-S23
3J06140-03 (Water) Sampled: 10/03/23 15:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	ND		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 44.1	70-130	10/10/23
4-Bromofluorobenzene	87%	Conc: 43.3	70-130	10/10/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:29

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC16-S23
 3J06140-03RE1 (Water) Sampled: 10/03/23 15:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/11/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/11/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/11/23	
Chloromethane	0.24	0.23	0.50	ug/l	1	10/11/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 42.2	70-130			10/11/23	
4-Bromofluorobenzene	89%	Conc: 44.7	70-130			10/11/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC6-S23
3J06140-04 (Water) Sampled: 10/03/23 14:39 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0649 **Prepared:** 10/09/23 08:22
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	115%	Conc: 11.7	70-130			10/11/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0657 **Prepared:** 10/09/23 08:37
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1268 **Prepared:** 10/15/23 08:11
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.45	1.6	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.43	1.6	ng/l	1	10/18/23	
ADONA	ND	0.44	1.6	ng/l	1	10/18/23	
EtFOSAA	ND	0.39	1.6	ng/l	1	10/18/23	
HFPO-DA	ND	0.70	1.6	ng/l	1	10/18/23	
MeFOSAA	ND	0.46	1.6	ng/l	1	10/18/23	
PFBS	ND	0.46	1.6	ng/l	1	10/18/23	
PFDA	ND	0.36	1.6	ng/l	1	10/18/23	
PFDaA	ND	0.53	1.6	ng/l	1	10/18/23	
PFHpA	ND	0.43	1.6	ng/l	1	10/18/23	
PFHxA	ND	0.39	1.6	ng/l	1	10/18/23	
PFHxS	ND	0.48	1.6	ng/l	1	10/18/23	
PFNA	ND	0.42	1.6	ng/l	1	10/18/23	
PFOA	ND	0.54	1.6	ng/l	1	10/18/23	
PFOS	ND	0.43	1.6	ng/l	1	10/18/23	
PFTeDA	ND	0.36	1.6	ng/l	1	10/18/23	
PFTTrDA	ND	0.34	1.6	ng/l	1	10/18/23	
PFUnA	ND	0.38	1.6	ng/l	1	10/18/23	
<i>Surrogate(s)</i>							
13C2-PFDA	101%	Conc: 32.4	70-130			10/18/23	
13C2-PFHxA	101%	Conc: 32.6	70-130			10/18/23	
d5-EtFOSAA	111%	Conc: 143	70-130			10/18/23	
HFPO-DA-13C3	100%	Conc: 32.1	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0661 **Prepared:** 10/09/23 08:43
Preparation: EPA 5030B **Analyst:** ADM

3J06140

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC6-S23
3J06140-04 (Water) Sampled: 10/03/23 14:39 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43			Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC6-S23
3J06140-04 (Water) Sampled: 10/03/23 14:39 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	ND		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 46.2	70-130	10/10/23
4-Bromofluorobenzene	93%	Conc: 46.5	70-130	10/10/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC6-S23
 3J06140-04RE1 (Water) Sampled: 10/03/23 14:39 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0916		Preparation: EPA 5030B			Prepared: 10/11/23 12:04		Analyst: ADM
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloromethane	0.26	0.23	0.50	ug/l	1	10/12/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	86%	Conc: 42.8	70-130			10/12/23	
4-Bromofluorobenzene	93%	Conc: 46.3	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC5-S23
3J06140-05 (Water) Sampled: 10/03/23 12:05 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0657 **Prepared:** 10/09/23 08:37
Preparation: EPA 5030B **Analyst:** ADM
 1,2,3-Trichloropropane ND 0.0012 0.0050 ug/l 1 10/11/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1268 **Prepared:** 10/15/23 08:11
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.46	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	10/18/23	
ADONA	ND	0.46	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.72	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.47	1.7	ng/l	1	10/18/23	
PFBS	ND	0.48	1.7	ng/l	1	10/18/23	
PFDA	ND	0.37	1.7	ng/l	1	10/18/23	
PFDoA	ND	0.54	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.44	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.40	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.49	1.7	ng/l	1	10/18/23	
PFNA	ND	0.43	1.7	ng/l	1	10/18/23	
PFOA	ND	0.55	1.7	ng/l	1	10/18/23	
PFOS	ND	0.44	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.37	1.7	ng/l	1	10/18/23	
PFTrDA	ND	0.34	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.39	1.7	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	101%	Conc: 33.4	70-130	10/18/23
13C2-PFHxA	102%	Conc: 33.8	70-130	10/18/23
d5-EtFOSAA	111%	Conc: 146	70-130	10/18/23
HFPO-DA-13C3	101%	Conc: 33.4	70-130	10/18/23

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0661 **Prepared:** 10/09/23 08:43
Preparation: EPA 5030B **Analyst:** ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC5-S23
3J06140-05 (Water) Sampled: 10/03/23 12:05 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC5-S23
3J06140-05 (Water) Sampled: 10/03/23 12:05 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	ND		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 45.9	70-130	10/10/23
4-Bromofluorobenzene	95%	Conc: 47.4	70-130	10/10/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC5-S23
3J06140-05RE1 (Water) Sampled: 10/03/23 12:05 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J1184		Preparation: EPA 522/SPE		Prepared: 10/13/23 07:59		Analyst: mld	
1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/18/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 9.20	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloromethane	0.28	0.23	0.50	ug/l	1	10/12/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	88%	Conc: 44.0	70-130			10/12/23	
4-Bromofluorobenzene	94%	Conc: 46.8	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S11
3J06140-06 (Water) Sampled: 10/03/23 11:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0649 **Prepared:** 10/09/23 08:22
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	119%	Conc: 12.0	70-130			10/11/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0657 **Prepared:** 10/09/23 08:37
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1268 **Prepared:** 10/15/23 08:11
Preparation: EPA 537/SPE **Analyst:** jna

11Cl-PF3OUdS	ND	0.49	1.7	ng/l	1	10/18/23	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	10/18/23	
ADONA	ND	0.48	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.76	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/18/23	
PFBS	ND	0.50	1.7	ng/l	1	10/18/23	
PFDA	ND	0.39	1.7	ng/l	1	10/18/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.52	1.7	ng/l	1	10/18/23	
PFNA	ND	0.45	1.7	ng/l	1	10/18/23	
PFOA	ND	0.58	1.7	ng/l	1	10/18/23	
PFOS	ND	0.46	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/18/23	
<i>Surrogate(s)</i>							
13C2-PFDA	100%	Conc: 34.6	70-130			10/18/23	
13C2-PFHxA	100%	Conc: 34.7	70-130			10/18/23	
d5-EtFOSAA	108%	Conc: 149	70-130			10/18/23	
HFPO-DA-13C3	98%	Conc: 34.0	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0661 **Prepared:** 10/09/23 08:43
Preparation: EPA 5030B **Analyst:** ADM

3J06140

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S11
3J06140-06 (Water) Sampled: 10/03/23 11:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	4.9	3.1	5.0	ug/l	1	10/10/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S11
3J06140-06 (Water) Sampled: 10/03/23 11:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	ND		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	93%	Conc: 46.6	70-130	10/10/23
4-Bromofluorobenzene	93%	Conc: 46.4	70-130	10/10/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC4-S11
 3J06140-06RE1 (Water) Sampled: 10/03/23 11:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	87%	Conc: 43.3	70-130			10/12/23	
4-Bromofluorobenzene	92%	Conc: 46.2	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC16-S11
3J06140-07 (Water) Sampled: 10/03/23 15:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0657	Preparation: EPA 5030B			Prepared: 10/09/23 08:37	Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1268	Preparation: EPA 537/SPE			Prepared: 10/15/23 08:11	Analyst: jna		
11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	10/18/23	
ADONA	ND	0.46	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.72	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.48	1.7	ng/l	1	10/18/23	
PFBS	ND	0.48	1.7	ng/l	1	10/18/23	
PFDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFDoA	ND	0.55	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.49	1.7	ng/l	1	10/18/23	
PFNA	ND	0.43	1.7	ng/l	1	10/18/23	
PFOA	ND	0.56	1.7	ng/l	1	10/18/23	
PFOS	ND	0.44	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/18/23	

<i>Surrogate(s)</i>							
13C2-PFDA	100%	Conc: 33.4	70-130			10/18/23	
13C2-PFHxA	100%	Conc: 33.4	70-130			10/18/23	
d5-EtFOSAA	108%	Conc: 144	70-130			10/18/23	
HFPO-DA-13C3	99%	Conc: 33.0	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0661	Preparation: EPA 5030B			Prepared: 10/09/23 08:43	Analyst: ADM		
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/10/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/10/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/10/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/10/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC16-S11
3J06140-07 (Water) Sampled: 10/03/23 15:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0661		Preparation: EPA 5030B		Prepared: 10/09/23 08:43		Analyst: ADM	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/10/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/10/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/10/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/10/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/10/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/10/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/10/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/10/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/10/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/10/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/10/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/10/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/10/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/10/23	
Acetone	ND	3.1	5.0	ug/l	1	10/10/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/10/23	
Benzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/10/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/10/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/10/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/10/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/10/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/10/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/10/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/10/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/10/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/10/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/10/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/10/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/10/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/10/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC16-S11
3J06140-07 (Water) Sampled: 10/03/23 15:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0661

Preparation: EPA 5030B

Prepared: 10/09/23 08:43

Analyst: ADM

Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/10/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/10/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/10/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/10/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/10/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/10/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/10/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/10/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/10/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/10/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/10/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/10/23	
Styrene	ND	0.19	0.50	ug/l	1	10/10/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/10/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/10/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
THMs, Total	ND		0.50	ug/l	1	10/10/23	
Toluene	ND	0.29	0.50	ug/l	1	10/10/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/10/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/10/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/10/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/10/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/10/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	92%	Conc: 46.0	70-130	10/10/23
4-Bromofluorobenzene	91%	Conc: 45.7	70-130	10/10/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC16-S11
3J06140-07RE1 (Water) Sampled: 10/03/23 15:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J1184		Preparation: EPA 522/SPE		Prepared: 10/13/23 07:59		Analyst: mld	
1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/18/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	118%	Conc: 11.8	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloromethane	0.42	0.23	0.50	ug/l	1	10/12/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	86%	Conc: 42.9	70-130			10/12/23	
4-Bromofluorobenzene	94%	Conc: 47.2	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC5-S11
3J06140-08 (Water) Sampled: 10/03/23 12:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0649 **Prepared:** 10/09/23 08:22
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	107%	Conc: 11.0	70-130			10/11/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0657 **Prepared:** 10/09/23 08:37
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1268 **Prepared:** 10/15/23 08:11
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/18/23	
ADONA	ND	0.46	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.73	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.48	1.7	ng/l	1	10/18/23	
PFBS	ND	0.49	1.7	ng/l	1	10/18/23	
PFDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/18/23	
PFNA	ND	0.44	1.7	ng/l	1	10/18/23	
PFOA	ND	0.56	1.7	ng/l	1	10/18/23	
PFOS	ND	0.45	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/18/23	
<i>Surrogate(s)</i>							
13C2-PFDA	100%	Conc: 33.7	70-130			10/18/23	
13C2-PFHxA	100%	Conc: 33.6	70-130			10/18/23	
d5-EtFOSAA	111%	Conc: 150	70-130			10/18/23	
HFPO-DA-13C3	96%	Conc: 32.2	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0916 **Prepared:** 10/11/23 12:04
Preparation: EPA 5030B **Analyst:** ADM

3J06140

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC5-S11
3J06140-08 (Water) Sampled: 10/03/23 12:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0916

Preparation: EPA 5030B

Prepared: 10/11/23 12:04

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC5-S11
3J06140-08 (Water) Sampled: 10/03/23 12:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
Chloromethane	0.24	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC5-S11
 3J06140-08 (Water) Sampled: 10/03/23 12:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0916

Preparation: EPA 5030B

Prepared: 10/11/23 12:04

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 44.0	70-130			10/12/23	
4-Bromofluorobenzene	93%	Conc: 46.4	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC17-S23
3J06140-09 (Water) Sampled: 10/03/23 15:28 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0650 **Prepared:** 10/09/23 08:26
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	113%	Conc: 11.3	70-130			10/11/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0657 **Prepared:** 10/09/23 08:37
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1282 **Prepared:** 10/16/23 08:19
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/19/23	
ADONA	ND	0.48	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/19/23	
PFBS	ND	0.50	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	ND	0.58	1.7	ng/l	1	10/19/23	
PFOS	ND	0.46	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	
<i>Surrogate(s)</i>							
13C2-PFDA	97%	Conc: 33.6	70-130			10/19/23	
13C2-PFHxA	101%	Conc: 34.9	70-130			10/19/23	
d5-EtFOSAA	115%	Conc: 160	70-130			10/19/23	
HFPO-DA-13C3	100%	Conc: 34.7	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0916 **Prepared:** 10/11/23 12:04
Preparation: EPA 5030B **Analyst:** ADM

3J06140

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC17-S23
3J06140-09 (Water) Sampled: 10/03/23 15:28 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0916		Preparation: EPA 5030B		Prepared: 10/11/23 12:04		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC17-S23
3J06140-09 (Water) Sampled: 10/03/23 15:28 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0916

Preparation: EPA 5030B

Prepared: 10/11/23 12:04

Analyst: ADM

Chloromethane	1.1	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC17-S23
 3J06140-09 (Water) Sampled: 10/03/23 15:28 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0916

Preparation: EPA 5030B

Prepared: 10/11/23 12:04

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 43.9	70-130			10/12/23	
4-Bromofluorobenzene	94%	Conc: 47.1	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S11D
3J06140-10 (Water) Sampled: 10/03/23 11:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0650 **Prepared:** 10/09/23 08:26
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	120%	Conc: 12.1	70-130			10/11/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0657 **Prepared:** 10/09/23 08:37
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1282 **Prepared:** 10/16/23 08:19
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/19/23	
ADONA	ND	0.48	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/19/23	
PFBS	ND	0.50	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	ND	0.58	1.7	ng/l	1	10/19/23	
PFOS	ND	0.46	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	100%	Conc: 34.5	70-130			10/19/23	
13C2-PFHxA	101%	Conc: 34.8	70-130			10/19/23	
d5-EtFOSAA	114%	Conc: 158	70-130			10/19/23	
HFPO-DA-13C3	100%	Conc: 34.8	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0917 **Prepared:** 10/11/23 12:05
Preparation: EPA 5030B **Analyst:** ADM

3J06140

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S11D
3J06140-10 (Water) Sampled: 10/03/23 11:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S11D
3J06140-10 (Water) Sampled: 10/03/23 11:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	0.80	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:29

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC4-S11D
 3J06140-10 (Water) Sampled: 10/03/23 11:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	88%	Conc: 44.0	70-130			10/12/23	
4-Bromofluorobenzene	89%	Conc: 44.3	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S23D
3J06140-11 (Water) Sampled: 10/03/23 11:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0650

Preparation: EPA 522/SPE

Prepared: 10/09/23 08:26

Analyst: mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	111%	Conc: 10.5	70-130			10/11/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W3J0918

Preparation: EPA 5030B

Prepared: 10/11/23 07:41

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1282

Preparation: EPA 537/SPE

Prepared: 10/16/23 08:19

Analyst: jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/19/23	
ADONA	ND	0.48	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/19/23	
PFBS	ND	0.50	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	ND	0.58	1.7	ng/l	1	10/19/23	
PFOS	ND	0.46	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	96%	Conc: 33.2	70-130			10/19/23	
13C2-PFHxA	101%	Conc: 34.8	70-130			10/19/23	
d5-EtFOSAA	112%	Conc: 155	70-130			10/19/23	
HFPO-DA-13C3	102%	Conc: 35.4	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

3J06140

Page 43 of 75

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S23D
3J06140-11 (Water) Sampled: 10/03/23 11:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S23D
 3J06140-11 (Water) Sampled: 10/03/23 11:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:29

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC4-S23D
 3J06140-11 (Water) Sampled: 10/03/23 11:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0917 **Preparation:** EPA 5030B **Prepared:** 10/11/23 12:05
Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	86%	Conc: 43.2	70-130			10/12/23	
4-Bromofluorobenzene	92%	Conc: 45.9	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S23
3J06140-12 (Water) Sampled: 10/03/23 11:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0650 **Prepared:** 10/09/23 08:26
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/11/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	116%	Conc: 10.9	70-130			10/11/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0918 **Prepared:** 10/11/23 07:41
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/11/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1282 **Prepared:** 10/16/23 08:19
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/19/23	
ADONA	ND	0.47	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.73	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.49	1.7	ng/l	1	10/19/23	
PFBS	ND	0.49	1.7	ng/l	1	10/19/23	
PFDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/19/23	
PFNA	ND	0.44	1.7	ng/l	1	10/19/23	
PFOA	ND	0.56	1.7	ng/l	1	10/19/23	
PFOS	ND	0.45	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/19/23	
<i>Surrogate(s)</i>							
13C2-PFDA	100%	Conc: 33.7	70-130			10/19/23	
13C2-PFHxA	102%	Conc: 34.4	70-130			10/19/23	
d5-EtFOSAA	114%	Conc: 154	70-130			10/19/23	
HFPO-DA-13C3	101%	Conc: 34.0	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0917 **Prepared:** 10/11/23 12:05
Preparation: EPA 5030B **Analyst:** ADM

3J06140

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S23
3J06140-12 (Water) Sampled: 10/03/23 11:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC4-S23
3J06140-12 (Water) Sampled: 10/03/23 11:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC4-S23
 3J06140-12 (Water) Sampled: 10/03/23 11:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 44.0	70-130			10/12/23	
4-Bromofluorobenzene	92%	Conc: 45.9	70-130			10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0649 - EPA 522											
Blank (W3J0649-BLK1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							B-02
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.59			ug/l	10.0		86	70-130			
LCS (W3J0649-BS1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,4-Dioxane	0.348	0.028	0.070	ug/l	0.400		87	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.62			ug/l	10.0		86	70-130			
LCS Dup (W3J0649-BSD1)					Prepared: 10/09/23 Analyzed: 10/10/23						
1,4-Dioxane	0.411	0.028	0.070	ug/l	0.400		103	70-130	17	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.9			ug/l	10.0		109	70-130			
Batch: W3J0650 - EPA 522											
Blank (W3J0650-BLK1)					Prepared: 10/09/23 Analyzed: 10/11/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							B-02
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.7			ug/l	10.0		107	70-130			
LCS (W3J0650-BS1)					Prepared: 10/09/23 Analyzed: 10/11/23						
1,4-Dioxane	1.99	0.028	0.070	ug/l	2.00		100	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.3			ug/l	10.0		103	70-130			
LCS Dup (W3J0650-BSD1)					Prepared: 10/09/23 Analyzed: 10/11/23						
1,4-Dioxane	1.98	0.028	0.070	ug/l	2.00		99	70-130	0.6	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.5			ug/l	10.0		105	70-130			
Batch: W3J1184 - EPA 522											
Blank (W3J1184-BLK1)					Prepared: 10/13/23 Analyzed: 10/18/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.62			ug/l	10.0		86	70-130			
LCS (W3J1184-BS1)					Prepared: 10/13/23 Analyzed: 10/18/23						
1,4-Dioxane	0.389	0.028	0.070	ug/l	0.400		97	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	10.6			ug/l	10.0		106	70-130			
LCS Dup (W3J1184-BSD1)					Prepared: 10/13/23 Analyzed: 10/18/23						
1,4-Dioxane	0.333	0.028	0.070	ug/l	0.400		83	70-130	15	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.48			ug/l	10.0		95	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0657 - SRL 524M-TCP											
Blank (W3J0657-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared: 10/09/23 Analyzed: 10/11/23						
LCS (W3J0657-BS1)											
1,2,3-Trichloropropane	0.0200	0.0012	0.0050	ug/l	0.0200		100	80-120			
					Prepared: 10/09/23 Analyzed: 10/11/23						
LCS Dup (W3J0657-BSD1)											
1,2,3-Trichloropropane	0.0203	0.0012	0.0050	ug/l	0.0200		101	80-120	1	20	
					Prepared: 10/09/23 Analyzed: 10/11/23						
Duplicate (W3J0657-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
					Source: 3J06140-01						
Batch: W3J0918 - SRL 524M-TCP											
Blank (W3J0918-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared & Analyzed: 10/11/23						
LCS (W3J0918-BS1)											
1,2,3-Trichloropropane	0.0191	0.0012	0.0050	ug/l	0.0200		96	80-120			
					Prepared & Analyzed: 10/11/23						
LCS Dup (W3J0918-BSD1)											
1,2,3-Trichloropropane	0.0197	0.0012	0.0050	ug/l	0.0200		98	80-120	3	20	
					Prepared & Analyzed: 10/11/23						
Duplicate (W3J0918-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
					Source: 3114009-01						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1268 - EPA 537.1											
Blank (W3J1268-BLK1)						Prepared: 10/15/23 Analyzed: 10/18/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	37.1			ng/l	40.0		93	70-130			
13C2-PFHxA	37.8			ng/l	40.0		95	70-130			
d5-EtFOSAA	167			ng/l	160		105	70-130			
HFPO-DA-13C3	36.3			ng/l	40.0		91	70-130			
LCS (W3J1268-BS1)						Prepared: 10/15/23 Analyzed: 10/18/23					
11CI-PF3OUdS	78.5	0.56	2.0	ng/l	80.0		98	70-130			
9CI-PF3ONS	77.6	0.53	2.0	ng/l	80.0		97	70-130			
ADONA	72.0	0.55	2.0	ng/l	80.0		90	70-130			
EtFOSAA	74.9	0.48	2.0	ng/l	80.0		94	70-130			
HFPO-DA	70.3	0.87	2.0	ng/l	80.0		88	70-130			
MeFOSAA	77.6	0.58	2.0	ng/l	80.0		97	70-130			
PFBS	76.2	0.58	2.0	ng/l	80.0		95	70-130			
PFDA	68.7	0.45	2.0	ng/l	80.0		86	70-130			
PFDoA	73.8	0.66	2.0	ng/l	80.0		92	70-130			
PFHpA	74.5	0.53	2.0	ng/l	80.0		93	70-130			
PFHxA	71.9	0.49	2.0	ng/l	80.0		90	70-130			
PFHxS	78.5	0.59	2.0	ng/l	80.0		98	70-130			
PFNA	74.0	0.52	2.0	ng/l	80.0		93	70-130			
PFOA	77.6	0.67	2.0	ng/l	80.0		97	70-130			
PFOS	74.9	0.53	2.0	ng/l	80.0		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1268 - EPA 537.1 (Continued)											
LCS (W3J1268-BS1)						Prepared: 10/15/23 Analyzed: 10/18/23					
PFTeDA	73.9	0.45	2.0	ng/l	80.0		92	70-130			
PFTTrDA	64.9	0.42	2.0	ng/l	80.0		81	70-130			
PFUnA	73.9	0.48	2.0	ng/l	80.0		92	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	38.3			ng/l	40.0		96	70-130			
13C2-PFHxA	38.3			ng/l	40.0		96	70-130			
d5-EtFOSAA	170			ng/l	160		106	70-130			
HFPO-DA-13C3	37.6			ng/l	40.0		94	70-130			
LCS Dup (W3J1268-BSD1)						Prepared: 10/15/23 Analyzed: 10/18/23					
11CI-PF3OUdS	78.6	0.56	2.0	ng/l	80.0		98	70-130	0.2	30	
9CI-PF3ONS	79.6	0.53	2.0	ng/l	80.0		100	70-130	3	30	
ADONA	72.9	0.55	2.0	ng/l	80.0		91	70-130	1	30	
EtFOSAA	75.8	0.48	2.0	ng/l	80.0		95	70-130	1	30	
HFPO-DA	69.8	0.87	2.0	ng/l	80.0		87	70-130	0.7	30	
MeFOSAA	77.2	0.58	2.0	ng/l	80.0		97	70-130	0.5	30	
PFBS	76.1	0.58	2.0	ng/l	80.0		95	70-130	0.02	30	
PFDA	68.4	0.45	2.0	ng/l	80.0		85	70-130	0.5	30	
PFDoA	74.6	0.66	2.0	ng/l	80.0		93	70-130	1	30	
PFHpA	73.6	0.53	2.0	ng/l	80.0		92	70-130	1	30	
PFHxA	71.8	0.49	2.0	ng/l	80.0		90	70-130	0.2	30	
PFHxS	75.2	0.59	2.0	ng/l	80.0		94	70-130	4	30	
PFNA	73.7	0.52	2.0	ng/l	80.0		92	70-130	0.4	30	
PFOA	77.4	0.67	2.0	ng/l	80.0		97	70-130	0.4	30	
PFOS	75.2	0.53	2.0	ng/l	80.0		94	70-130	0.4	30	
PFTeDA	73.1	0.45	2.0	ng/l	80.0		91	70-130	1	30	
PFTTrDA	64.8	0.42	2.0	ng/l	80.0		81	70-130	0.2	30	
PFUnA	74.2	0.48	2.0	ng/l	80.0		93	70-130	0.4	30	
<i>Surrogate(s)</i>											
13C2-PFDA	37.5			ng/l	40.0		94	70-130			
13C2-PFHxA	37.8			ng/l	40.0		95	70-130			
d5-EtFOSAA	173			ng/l	160		108	70-130			
HFPO-DA-13C3	37.8			ng/l	40.0		95	70-130			
Batch: W3J1282 - EPA 537.1											
Blank (W3J1282-BLK1)						Prepared: 10/16/23 Analyzed: 10/19/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1282 - EPA 537.1 (Continued)											
Blank (W3J1282-BLK1)						Prepared: 10/16/23 Analyzed: 10/19/23					
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	39.7			ng/l	40.0		99	70-130			
13C2-PFHxA	40.3			ng/l	40.0		101	70-130			
d5-EtFOSAA	187			ng/l	160		117	70-130			
HFPO-DA-13C3	39.7			ng/l	40.0		99	70-130			
LCS (W3J1282-BS1)						Prepared: 10/16/23 Analyzed: 10/19/23					
11Cl-PF3OUdS	1.90	0.56	2.0	ng/l	2.00		95	50-150			J
9Cl-PF3ONS	2.02	0.53	2.0	ng/l	2.00		101	50-150			
ADONA	1.88	0.55	2.0	ng/l	2.00		94	50-150			J
EtFOSAA	2.18	0.48	2.0	ng/l	2.00		109	50-150			
HFPO-DA	2.17	0.87	2.0	ng/l	2.00		108	50-150			
MeFOSAA	2.08	0.58	2.0	ng/l	2.00		104	50-150			
PFBS	1.91	0.58	2.0	ng/l	2.00		95	50-150			J
PFDA	1.71	0.45	2.0	ng/l	2.00		86	50-150			J
PFDoA	1.85	0.66	2.0	ng/l	2.00		93	50-150			J
PFHpA	1.94	0.53	2.0	ng/l	2.00		97	50-150			J
PFHxA	1.86	0.49	2.0	ng/l	2.00		93	50-150			J
PFHxS	1.99	0.59	2.0	ng/l	2.00		99	50-150			J
PFNA	1.93	0.52	2.0	ng/l	2.00		96	50-150			J
PFOA	2.00	0.67	2.0	ng/l	2.00		100	50-150			
PFOS	2.05	0.53	2.0	ng/l	2.00		103	50-150			
PFTeDA	3.52	0.45	2.0	ng/l	2.00		176	50-150			Q-08
PFTrDA	1.58	0.42	2.0	ng/l	2.00		79	50-150			J
PFUnA	1.82	0.48	2.0	ng/l	2.00		91	50-150			J
<i>Surrogate(s)</i>											
13C2-PFDA	39.5			ng/l	40.0		99	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1282 - EPA 537.1 (Continued)											
LCS (W3J1282-BS1)						Prepared: 10/16/23 Analyzed: 10/19/23					
<i>Surrogate(s)</i>											
13C2-PFHxA	40.3			ng/l	40.0		101	70-130			
d5-EtFOSAA	185			ng/l	160		115	70-130			
HFPO-DA-13C3	40.6			ng/l	40.0		102	70-130			
LCS Dup (W3J1282-BSD1)						Prepared: 10/16/23 Analyzed: 10/19/23					
11CI-PF3OUdS	1.91	0.56	2.0	ng/l	2.00		96	50-150	0.4	30	J
9CI-PF3ONS	2.03	0.53	2.0	ng/l	2.00		102	50-150	0.6	30	
ADONA	1.92	0.55	2.0	ng/l	2.00		96	50-150	2	30	J
EtFOSAA	2.25	0.48	2.0	ng/l	2.00		112	50-150	3	30	
HFPO-DA	2.19	0.87	2.0	ng/l	2.00		109	50-150	0.9	30	
MeFOSAA	2.03	0.58	2.0	ng/l	2.00		102	50-150	2	30	
PFBS	2.02	0.58	2.0	ng/l	2.00		101	50-150	6	30	
PFDA	1.80	0.45	2.0	ng/l	2.00		90	50-150	5	30	J
PFDoA	2.03	0.66	2.0	ng/l	2.00		101	50-150	9	30	
PFHpA	1.95	0.53	2.0	ng/l	2.00		97	50-150	0.3	30	J
PFHxA	1.99	0.49	2.0	ng/l	2.00		100	50-150	7	30	J
PFHxS	2.01	0.59	2.0	ng/l	2.00		101	50-150	1	30	
PFNA	1.99	0.52	2.0	ng/l	2.00		100	50-150	3	30	J
PFOA	2.04	0.67	2.0	ng/l	2.00		102	50-150	2	30	
PFOS	1.86	0.53	2.0	ng/l	2.00		93	50-150	10	30	J
PFTeDA	3.32	0.45	2.0	ng/l	2.00		166	50-150	6	30	Q-08
PFTrDA	1.66	0.42	2.0	ng/l	2.00		83	50-150	5	30	J
PFUnA	1.99	0.48	2.0	ng/l	2.00		100	50-150	9	30	J
<i>Surrogate(s)</i>											
13C2-PFDA	40.1			ng/l	40.0		100	70-130			
13C2-PFHxA	41.0			ng/l	40.0		103	70-130			
d5-EtFOSAA	189			ng/l	160		118	70-130			
HFPO-DA-13C3	41.0			ng/l	40.0		102	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC		RPD		Qualifier
							%REC	Limits	RPD	Limit	
Batch: W3J0661 - EPA 524.2											
Blank (W3J0661-BLK1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
Blank (W3J0661-BLK1)						Prepared: 10/09/23 Analyzed: 10/10/23					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	47.7			ug/l	50.0		95	70-130			
4-Bromofluorobenzene	43.8			ug/l	50.0		88	70-130			
LCS (W3J0661-BS1)						Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,1,2-Tetrachloroethane	4.38	0.24	0.50	ug/l	5.00		88	70-130			
1,1,1-Trichloroethane	5.43	0.26	0.50	ug/l	5.00		109	70-130			
1,1,2,2-Tetrachloroethane	4.57	0.20	0.50	ug/l	5.00		91	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)										
LCS (W3J0661-BS1)					Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,2-Trichloroethane	4.78	0.19	0.50	ug/l	5.00		96 70-130			
1,1-Dichloroethane	5.97	0.27	0.50	ug/l	5.00		119 70-130			
1,1-Dichloroethene	3.87	0.16	0.50	ug/l	5.00		77 70-130			
1,1-Dichloropropene	3.96	0.14	0.50	ug/l	5.00		79 70-130			
1,2,3-Trichlorobenzene	4.20	0.40	0.50	ug/l	5.00		84 70-130			
1,2,3-Trichloropropane	4.67	0.22	0.50	ug/l	5.00		93 70-130			
1,2,4-Trichlorobenzene	4.13	0.17	0.50	ug/l	5.00		83 70-130			
1,2,4-Trimethylbenzene	5.02	0.20	0.50	ug/l	5.00		100 70-130			
1,2-Dichloroethane	4.86	0.24	0.50	ug/l	5.00		97 70-130			
1,2-Dichloropropane	4.68	0.13	0.50	ug/l	5.00		94 70-130			
1,3,5-Trimethylbenzene	5.00	0.17	0.50	ug/l	5.00		100 70-130			
1,3-Dichloropropane	4.83	0.27	0.50	ug/l	5.00		97 70-130			
2,2-Dichloropropane	5.40	0.17	0.50	ug/l	5.00		108 70-130			
2-Butanone	6.97	1.5	5.0	ug/l	5.00		139 70-130			Q-08
2-Chlorotoluene	5.13	0.15	0.50	ug/l	5.00		103 70-130			
2-Hexanone	5.29	1.2	5.0	ug/l	5.00		106 70-130			
4-Chlorotoluene	5.12	0.15	0.50	ug/l	5.00		102 70-130			
4-Methyl-2-pentanone	5.04	1.8	5.0	ug/l	5.00		101 70-130			
Acetone	43.1	3.1	5.0	ug/l	50.0		86 70-130			
Benzene	4.67	0.15	0.50	ug/l	5.00		93 70-130			
Bromobenzene	4.42	0.15	0.50	ug/l	5.00		88 70-130			
Bromochloromethane	5.86	0.15	0.50	ug/l	5.00		117 70-130			
Bromodichloromethane	4.58	0.24	0.50	ug/l	5.00		92 70-130			
Bromoform	4.31	0.38	0.50	ug/l	5.00		86 70-130			
Bromomethane	3.11	0.27	0.50	ug/l	5.00		62 70-130			Q-11
Carbon Disulfide	3.39	0.25	0.50	ug/l	5.00		68 70-130			Q-11
Carbon tetrachloride	4.41	0.27	0.50	ug/l	5.00		88 70-130			
Chlorobenzene	4.66	0.15	0.50	ug/l	5.00		93 70-130			
Chloroethane	3.05	0.17	0.50	ug/l	5.00		61 70-130			Q-11
Chloroform	6.13	0.27	0.50	ug/l	5.00		123 70-130			
Chloromethane	4.13	0.23	0.50	ug/l	5.00		83 70-130			
cis-1,2-Dichloroethene	5.93	0.25	0.50	ug/l	5.00		119 70-130			
cis-1,3-Dichloropropene	4.02	0.30	0.50	ug/l	5.00		80 70-130			
Dibromochloromethane	4.59	0.20	0.50	ug/l	5.00		92 70-130			
Dibromomethane	4.93	0.20	0.50	ug/l	5.00		99 70-130			
Dichlorodifluoromethane (Freon 12)	4.50	0.45	0.50	ug/l	5.00		90 70-130			
Di-isopropyl ether	21.9	1.1	2.0	ug/l	20.0		110 70-130			
Ethyl tert-butyl ether	22.8	1.0	2.0	ug/l	20.0		114 70-130			
Ethylbenzene	4.54	0.21	0.50	ug/l	5.00		91 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)										
LCS (W3J0661-BS1)					Prepared: 10/09/23 Analyzed: 10/10/23					
Freon 113	3.76	1.5	5.0	ug/l	5.00		75 70-130			J
Hexachlorobutadiene	4.30	0.40	0.50	ug/l	5.00		86 70-130			
Isopropylbenzene	4.60	0.18	0.50	ug/l	5.00		92 70-130			
m,p-Xylene	4.58	0.33	0.50	ug/l	5.00		92 70-130			
m-Dichlorobenzene	5.22	0.14	0.50	ug/l	5.00		104 70-130			
Methyl tert-butyl ether (MTBE)	17.4	0.94	2.0	ug/l	20.0		87 70-130			
Methylene chloride	4.35	0.30	0.50	ug/l	5.00		87 70-130			
Naphthalene	4.27	0.35	0.50	ug/l	5.00		85 70-130			
n-Butylbenzene	4.94	0.29	0.50	ug/l	5.00		99 70-130			
n-Propylbenzene	5.52	0.18	0.50	ug/l	5.00		110 70-130			
o-Dichlorobenzene	5.36	0.19	0.50	ug/l	5.00		107 70-130			
o-Xylene	4.94	0.20	0.50	ug/l	5.00		99 70-130			
p-Dichlorobenzene	4.95	0.18	0.50	ug/l	5.00		99 70-130			
p-Isopropyltoluene	5.22	0.25	0.50	ug/l	5.00		104 70-130			
sec-Butylbenzene	5.27	0.24	0.50	ug/l	5.00		105 70-130			
Styrene	5.01	0.19	0.50	ug/l	5.00		100 70-130			
Tert-amyl methyl ether	20.2	0.59	2.0	ug/l	20.0		101 70-130			
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101 70-130			
Tetrachloroethene	4.00	0.18	0.50	ug/l	5.00		80 70-130			
Toluene	4.75	0.29	0.50	ug/l	5.00		95 70-130			
trans-1,2-Dichloroethene	4.32	0.26	0.50	ug/l	5.00		86 70-130			
trans-1,3-Dichloropropene	4.56	0.32	0.50	ug/l	5.00		91 70-130			
Trichloroethene	4.06	0.18	0.50	ug/l	5.00		81 70-130			
Trichlorofluoromethane	4.08	0.18	0.50	ug/l	5.00		82 70-130			
Vinyl chloride	3.81	0.18	0.50	ug/l	5.00		76 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	55.0			ug/l	50.0		110 70-130			
4-Bromofluorobenzene	48.2			ug/l	50.0		96 70-130			
LCS Dup (W3J0661-BSD1)					Prepared: 10/09/23 Analyzed: 10/10/23					
1,1,1,2-Tetrachloroethane	4.26	0.24	0.50	ug/l	5.00		85 70-130	3	30	
1,1,1-Trichloroethane	5.16	0.26	0.50	ug/l	5.00		103 70-130	5	30	
1,1,2,2-Tetrachloroethane	4.33	0.20	0.50	ug/l	5.00		87 70-130	5	30	
1,1,2-Trichloroethane	4.66	0.19	0.50	ug/l	5.00		93 70-130	2	30	
1,1-Dichloroethane	6.12	0.27	0.50	ug/l	5.00		122 70-130	3	30	
1,1-Dichloroethene	3.69	0.16	0.50	ug/l	5.00		74 70-130	5	30	
1,1-Dichloropropene	3.84	0.14	0.50	ug/l	5.00		77 70-130	3	30	
1,2,3-Trichlorobenzene	4.21	0.40	0.50	ug/l	5.00		84 70-130	0.3	30	
1,2,3-Trichloropropane	4.57	0.22	0.50	ug/l	5.00		91 70-130	2	30	
1,2,4-Trichlorobenzene	4.11	0.17	0.50	ug/l	5.00		82 70-130	0.4	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
LCS Dup (W3J0661-BSD1)											
						Prepared: 10/09/23 Analyzed: 10/10/23					
1,2,4-Trimethylbenzene	4.72	0.20	0.50	ug/l	5.00		94	70-130	6	30	
1,2-Dichloroethane	4.72	0.24	0.50	ug/l	5.00		94	70-130	3	30	
1,2-Dichloropropane	4.53	0.13	0.50	ug/l	5.00		91	70-130	3	30	
1,3,5-Trimethylbenzene	4.65	0.17	0.50	ug/l	5.00		93	70-130	7	30	
1,3-Dichloropropane	4.69	0.27	0.50	ug/l	5.00		94	70-130	3	30	
2,2-Dichloropropane	5.07	0.17	0.50	ug/l	5.00		101	70-130	6	30	
2-Butanone	6.93	1.5	5.0	ug/l	5.00		139	70-130	0.6	30	Q-08
2-Chlorotoluene	4.77	0.15	0.50	ug/l	5.00		95	70-130	7	30	
2-Hexanone	5.17	1.2	5.0	ug/l	5.00		103	70-130	2	30	
4-Chlorotoluene	4.78	0.15	0.50	ug/l	5.00		96	70-130	7	30	
4-Methyl-2-pentanone	4.92	1.8	5.0	ug/l	5.00		98	70-130	2	30	J
Acetone	43.8	3.1	5.0	ug/l	50.0		88	70-130	2	30	
Benzene	4.42	0.15	0.50	ug/l	5.00		88	70-130	6	30	
Bromobenzene	4.24	0.15	0.50	ug/l	5.00		85	70-130	4	30	
Bromochloromethane	5.57	0.15	0.50	ug/l	5.00		111	70-130	5	30	
Bromodichloromethane	4.54	0.24	0.50	ug/l	5.00		91	70-130	0.9	30	
Bromoform	4.12	0.38	0.50	ug/l	5.00		82	70-130	4	30	
Bromomethane	2.85	0.27	0.50	ug/l	5.00		57	70-130	9	30	Q-11
Carbon Disulfide	3.16	0.25	0.50	ug/l	5.00		63	70-130	7	30	Q-11
Carbon tetrachloride	4.25	0.27	0.50	ug/l	5.00		85	70-130	4	30	
Chlorobenzene	4.43	0.15	0.50	ug/l	5.00		89	70-130	5	30	
Chloroethane	2.87	0.17	0.50	ug/l	5.00		57	70-130	6	30	Q-11
Chloroform	5.78	0.27	0.50	ug/l	5.00		116	70-130	6	30	
Chloromethane	4.33	0.23	0.50	ug/l	5.00		87	70-130	5	30	
cis-1,2-Dichloroethene	5.54	0.25	0.50	ug/l	5.00		111	70-130	7	30	
cis-1,3-Dichloropropane	3.91	0.30	0.50	ug/l	5.00		78	70-130	3	30	
Dibromochloromethane	4.51	0.20	0.50	ug/l	5.00		90	70-130	2	30	
Dibromomethane	4.74	0.20	0.50	ug/l	5.00		95	70-130	4	30	
Dichlorodifluoromethane (Freon 12)	4.54	0.45	0.50	ug/l	5.00		91	70-130	0.8	30	
Di-isopropyl ether	23.2	1.1	2.0	ug/l	20.0		116	70-130	6	30	
Ethyl tert-butyl ether	22.6	1.0	2.0	ug/l	20.0		113	70-130	1	30	
Ethylbenzene	4.26	0.21	0.50	ug/l	5.00		85	70-130	6	30	
Freon 113	3.57	1.5	5.0	ug/l	5.00		71	70-130	5	30	J
Hexachlorobutadiene	4.09	0.40	0.50	ug/l	5.00		82	70-130	5	30	
Isopropylbenzene	4.24	0.18	0.50	ug/l	5.00		85	70-130	8	30	
m,p-Xylene	4.25	0.33	0.50	ug/l	5.00		85	70-130	7	30	
m-Dichlorobenzene	4.98	0.14	0.50	ug/l	5.00		100	70-130	5	30	
Methyl tert-butyl ether (MTBE)	18.3	0.94	2.0	ug/l	20.0		92	70-130	5	30	
Methylene chloride	4.26	0.30	0.50	ug/l	5.00		85	70-130	2	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0661 - EPA 524.2 (Continued)											
LCS Dup (W3J0661-BSD1)											
					Prepared: 10/09/23 Analyzed: 10/10/23						
Naphthalene	4.20	0.35	0.50	ug/l	5.00		84	70-130	2	30	
n-Butylbenzene	4.65	0.29	0.50	ug/l	5.00		93	70-130	6	30	
n-Propylbenzene	5.13	0.18	0.50	ug/l	5.00		103	70-130	7	30	
o-Dichlorobenzene	5.10	0.19	0.50	ug/l	5.00		102	70-130	5	30	
o-Xylene	4.58	0.20	0.50	ug/l	5.00		92	70-130	7	30	
p-Dichlorobenzene	4.69	0.18	0.50	ug/l	5.00		94	70-130	5	30	
p-Isopropyltoluene	4.87	0.25	0.50	ug/l	5.00		97	70-130	7	30	
sec-Butylbenzene	4.88	0.24	0.50	ug/l	5.00		98	70-130	8	30	
Styrene	4.67	0.19	0.50	ug/l	5.00		93	70-130	7	30	
Tert-amyl methyl ether	19.9	0.59	2.0	ug/l	20.0		99	70-130	2	30	
tert-Butylbenzene	4.72	0.18	0.50	ug/l	5.00		94	70-130	7	30	
Tetrachloroethene	3.86	0.18	0.50	ug/l	5.00		77	70-130	3	30	
Toluene	4.56	0.29	0.50	ug/l	5.00		91	70-130	4	30	
trans-1,2-Dichloroethene	4.28	0.26	0.50	ug/l	5.00		86	70-130	1	30	
trans-1,3-Dichloropropene	4.44	0.32	0.50	ug/l	5.00		89	70-130	3	30	
Trichloroethene	3.88	0.18	0.50	ug/l	5.00		78	70-130	4	30	
Trichlorofluoromethane	3.84	0.18	0.50	ug/l	5.00		77	70-130	6	30	
Vinyl chloride	3.74	0.18	0.50	ug/l	5.00		75	70-130	2	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.1			ug/l	50.0		108	70-130			
4-Bromofluorobenzene	47.6			ug/l	50.0		95	70-130			

Batch: W3J0916 - EPA 524.2

Blank (W3J0916-BLK1)											
					Prepared & Analyzed: 10/11/23						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
Blank (W3J0916-BLK1)					Prepared & Analyzed: 10/11/23						
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
Blank (W3J0916-BLK1)						Prepared & Analyzed: 10/11/23					
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.2			ug/l	50.0		88	70-130			
4-Bromofluorobenzene	45.1			ug/l	50.0		90	70-130			
LCS (W3J0916-BS1)						Prepared & Analyzed: 10/11/23					
1,1,1,2-Tetrachloroethane	5.04	0.24	0.50	ug/l	5.00		101	70-130			
1,1,1-Trichloroethane	4.58	0.26	0.50	ug/l	5.00		92	70-130			
1,1,2,2-Tetrachloroethane	4.75	0.20	0.50	ug/l	5.00		95	70-130			
1,1,2-Trichloroethane	4.98	0.19	0.50	ug/l	5.00		100	70-130			
1,1-Dichloroethane	5.32	0.27	0.50	ug/l	5.00		106	70-130			
1,1-Dichloroethene	5.28	0.16	0.50	ug/l	5.00		106	70-130			
1,1-Dichloropropene	4.98	0.14	0.50	ug/l	5.00		100	70-130			
1,2,3-Trichlorobenzene	4.41	0.40	0.50	ug/l	5.00		88	70-130			
1,2,3-Trichloropropane	4.78	0.22	0.50	ug/l	5.00		96	70-130			
1,2,4-Trichlorobenzene	4.74	0.17	0.50	ug/l	5.00		95	70-130			
1,2,4-Trimethylbenzene	4.84	0.20	0.50	ug/l	5.00		97	70-130			
1,2-Dichloroethane	4.87	0.24	0.50	ug/l	5.00		97	70-130			
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00		95	70-130			
1,3,5-Trimethylbenzene	4.77	0.17	0.50	ug/l	5.00		95	70-130			
1,3-Dichloropropane	5.05	0.27	0.50	ug/l	5.00		101	70-130			
2,2-Dichloropropane	5.10	0.17	0.50	ug/l	5.00		102	70-130			
2-Butanone	5.19	1.5	5.0	ug/l	5.00		104	70-130			
2-Chlorotoluene	4.65	0.15	0.50	ug/l	5.00		93	70-130			
2-Hexanone	4.80	1.2	5.0	ug/l	5.00		96	70-130			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
LCS (W3J0916-BS1)					Prepared & Analyzed: 10/11/23						
4-Chlorotoluene	4.54	0.15	0.50	ug/l	5.00		91	70-130			
4-Methyl-2-pentanone	4.63	1.8	5.0	ug/l	5.00		93	70-130			J
Acetone	53.7	3.1	5.0	ug/l	50.0		107	70-130			
Benzene	4.77	0.15	0.50	ug/l	5.00		95	70-130			
Bromobenzene	4.79	0.15	0.50	ug/l	5.00		96	70-130			
Bromochloromethane	4.90	0.15	0.50	ug/l	5.00		98	70-130			
Bromodichloromethane	4.78	0.24	0.50	ug/l	5.00		96	70-130			
Bromoform	4.65	0.38	0.50	ug/l	5.00		93	70-130			
Bromomethane	4.60	0.27	0.50	ug/l	5.00		92	70-130			
Carbon Disulfide	5.16	0.25	0.50	ug/l	5.00		103	70-130			
Carbon tetrachloride	4.88	0.27	0.50	ug/l	5.00		98	70-130			
Chlorobenzene	4.94	0.15	0.50	ug/l	5.00		99	70-130			
Chloroethane	4.48	0.17	0.50	ug/l	5.00		90	70-130			
Chloroform	4.99	0.27	0.50	ug/l	5.00		100	70-130			
Chloromethane	4.76	0.23	0.50	ug/l	5.00		95	70-130			
cis-1,2-Dichloroethene	5.24	0.25	0.50	ug/l	5.00		105	70-130			
cis-1,3-Dichloropropene	4.63	0.30	0.50	ug/l	5.00		93	70-130			
Dibromochloromethane	4.74	0.20	0.50	ug/l	5.00		95	70-130			
Dibromomethane	4.79	0.20	0.50	ug/l	5.00		96	70-130			
Dichlorodifluoromethane (Freon 12)	4.47	0.45	0.50	ug/l	5.00		89	70-130			
Di-isopropyl ether	24.7	1.1	2.0	ug/l	20.0		124	70-130			
Ethyl tert-butyl ether	22.6	1.0	2.0	ug/l	20.0		113	70-130			
Ethylbenzene	4.56	0.21	0.50	ug/l	5.00		91	70-130			
Freon 113	5.28	1.5	5.0	ug/l	5.00		106	70-130			
Hexachlorobutadiene	4.47	0.40	0.50	ug/l	5.00		89	70-130			
Isopropylbenzene	4.59	0.18	0.50	ug/l	5.00		92	70-130			
m,p-Xylene	4.70	0.33	0.50	ug/l	5.00		94	70-130			
m-Dichlorobenzene	4.64	0.14	0.50	ug/l	5.00		93	70-130			
Methyl tert-butyl ether (MTBE)	21.9	0.94	2.0	ug/l	20.0		109	70-130			
Methylene chloride	5.28	0.30	0.50	ug/l	5.00		106	70-130			
Naphthalene	4.66	0.35	0.50	ug/l	5.00		93	70-130			
n-Butylbenzene	4.62	0.29	0.50	ug/l	5.00		92	70-130			
n-Propylbenzene	4.75	0.18	0.50	ug/l	5.00		95	70-130			
o-Dichlorobenzene	5.11	0.19	0.50	ug/l	5.00		102	70-130			
o-Xylene	4.85	0.20	0.50	ug/l	5.00		97	70-130			
p-Dichlorobenzene	5.11	0.18	0.50	ug/l	5.00		102	70-130			
p-Isopropyltoluene	4.78	0.25	0.50	ug/l	5.00		96	70-130			
sec-Butylbenzene	4.71	0.24	0.50	ug/l	5.00		94	70-130			
Styrene	4.81	0.19	0.50	ug/l	5.00		96	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)										
LCS (W3J0916-BS1)					Prepared & Analyzed: 10/11/23					
Tert-amyl methyl ether	20.4	0.59	2.0	ug/l	20.0		102 70-130			
tert-Butylbenzene	4.57	0.18	0.50	ug/l	5.00		91 70-130			
Tetrachloroethene	4.64	0.18	0.50	ug/l	5.00		93 70-130			
Toluene	5.09	0.29	0.50	ug/l	5.00		102 70-130			
trans-1,2-Dichloroethene	5.28	0.26	0.50	ug/l	5.00		106 70-130			
trans-1,3-Dichloropropene	4.93	0.32	0.50	ug/l	5.00		99 70-130			
Trichloroethene	4.44	0.18	0.50	ug/l	5.00		89 70-130			
Trichlorofluoromethane	5.72	0.18	0.50	ug/l	5.00		114 70-130			
Vinyl chloride	4.48	0.18	0.50	ug/l	5.00		90 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	54.5			ug/l	50.0		109 70-130			
4-Bromofluorobenzene	53.7			ug/l	50.0		107 70-130			
LCS Dup (W3J0916-BSD1)					Prepared & Analyzed: 10/11/23					
1,1,1,2-Tetrachloroethane	4.83	0.24	0.50	ug/l	5.00		97 70-130	4	30	
1,1,1-Trichloroethane	4.63	0.26	0.50	ug/l	5.00		93 70-130	1	30	
1,1,2,2-Tetrachloroethane	5.02	0.20	0.50	ug/l	5.00		100 70-130	6	30	
1,1,2-Trichloroethane	4.90	0.19	0.50	ug/l	5.00		98 70-130	1	30	
1,1-Dichloroethane	4.58	0.27	0.50	ug/l	5.00		92 70-130	15	30	
1,1-Dichloroethene	4.82	0.16	0.50	ug/l	5.00		96 70-130	9	30	
1,1-Dichloropropene	4.48	0.14	0.50	ug/l	5.00		90 70-130	11	30	
1,2,3-Trichlorobenzene	4.73	0.40	0.50	ug/l	5.00		95 70-130	7	30	
1,2,3-Trichloropropane	5.04	0.22	0.50	ug/l	5.00		101 70-130	5	30	
1,2,4-Trichlorobenzene	5.09	0.17	0.50	ug/l	5.00		102 70-130	7	30	
1,2,4-Trimethylbenzene	4.71	0.20	0.50	ug/l	5.00		94 70-130	3	30	
1,2-Dichloroethane	4.49	0.24	0.50	ug/l	5.00		90 70-130	8	30	
1,2-Dichloropropane	4.51	0.13	0.50	ug/l	5.00		90 70-130	5	30	
1,3,5-Trimethylbenzene	4.57	0.17	0.50	ug/l	5.00		91 70-130	4	30	
1,3-Dichloropropane	4.91	0.27	0.50	ug/l	5.00		98 70-130	3	30	
2,2-Dichloropropane	4.58	0.17	0.50	ug/l	5.00		92 70-130	11	30	
2-Butanone	4.37	1.5	5.0	ug/l	5.00		87 70-130	17	30	J
2-Chlorotoluene	4.44	0.15	0.50	ug/l	5.00		89 70-130	5	30	
2-Hexanone	4.70	1.2	5.0	ug/l	5.00		94 70-130	2	30	J
4-Chlorotoluene	4.35	0.15	0.50	ug/l	5.00		87 70-130	4	30	
4-Methyl-2-pentanone	4.50	1.8	5.0	ug/l	5.00		90 70-130	3	30	J
Acetone	51.7	3.1	5.0	ug/l	50.0		103 70-130	4	30	
Benzene	4.46	0.15	0.50	ug/l	5.00		89 70-130	7	30	
Bromobenzene	4.68	0.15	0.50	ug/l	5.00		94 70-130	2	30	
Bromochloromethane	4.61	0.15	0.50	ug/l	5.00		92 70-130	6	30	
Bromodichloromethane	4.47	0.24	0.50	ug/l	5.00		89 70-130	7	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
LCS Dup (W3J0916-BSD1)					Prepared & Analyzed: 10/11/23						
Bromoform	4.52	0.38	0.50	ug/l	5.00		90	70-130	3	30	
Bromomethane	7.45	0.27	0.50	ug/l	5.00		149	70-130	47	30	A-01a, Q-08
Carbon Disulfide	4.58	0.25	0.50	ug/l	5.00		92	70-130	12	30	
Carbon tetrachloride	4.30	0.27	0.50	ug/l	5.00		86	70-130	12	30	
Chlorobenzene	4.72	0.15	0.50	ug/l	5.00		94	70-130	5	30	
Chloroethane	7.12	0.17	0.50	ug/l	5.00		142	70-130	46	30	A-01a, Q-08
Chloroform	4.51	0.27	0.50	ug/l	5.00		90	70-130	10	30	
Chloromethane	5.67	0.23	0.50	ug/l	5.00		113	70-130	18	30	
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00		91	70-130	14	30	
cis-1,3-Dichloropropene	4.32	0.30	0.50	ug/l	5.00		86	70-130	7	30	
Dibromochloromethane	4.52	0.20	0.50	ug/l	5.00		90	70-130	5	30	
Dibromomethane	4.58	0.20	0.50	ug/l	5.00		92	70-130	4	30	
Dichlorodifluoromethane (Freon 12)	4.48	0.45	0.50	ug/l	5.00		90	70-130	0.2	30	
Di-isopropyl ether	22.2	1.1	2.0	ug/l	20.0		111	70-130	10	30	
Ethyl tert-butyl ether	21.8	1.0	2.0	ug/l	20.0		109	70-130	3	30	
Ethylbenzene	4.21	0.21	0.50	ug/l	5.00		84	70-130	8	30	
Freon 113	4.72	1.5	5.0	ug/l	5.00		94	70-130	11	30	J
Hexachlorobutadiene	4.28	0.40	0.50	ug/l	5.00		86	70-130	4	30	
Isopropylbenzene	4.32	0.18	0.50	ug/l	5.00		86	70-130	6	30	
m,p-Xylene	4.36	0.33	0.50	ug/l	5.00		87	70-130	8	30	
m-Dichlorobenzene	4.51	0.14	0.50	ug/l	5.00		90	70-130	3	30	
Methyl tert-butyl ether (MTBE)	21.0	0.94	2.0	ug/l	20.0		105	70-130	4	30	
Methylene chloride	4.61	0.30	0.50	ug/l	5.00		92	70-130	14	30	
Naphthalene	4.81	0.35	0.50	ug/l	5.00		96	70-130	3	30	
n-Butylbenzene	4.44	0.29	0.50	ug/l	5.00		89	70-130	4	30	
n-Propylbenzene	4.43	0.18	0.50	ug/l	5.00		89	70-130	7	30	
o-Dichlorobenzene	4.99	0.19	0.50	ug/l	5.00		100	70-130	2	30	
o-Xylene	4.63	0.20	0.50	ug/l	5.00		93	70-130	4	30	
p-Dichlorobenzene	4.97	0.18	0.50	ug/l	5.00		99	70-130	3	30	
p-Isopropyltoluene	4.52	0.25	0.50	ug/l	5.00		90	70-130	6	30	
sec-Butylbenzene	4.35	0.24	0.50	ug/l	5.00		87	70-130	8	30	
Styrene	4.59	0.19	0.50	ug/l	5.00		92	70-130	5	30	
Tert-amyl methyl ether	21.6	0.59	2.0	ug/l	20.0		108	70-130	6	30	
tert-Butylbenzene	4.33	0.18	0.50	ug/l	5.00		87	70-130	5	30	
Tetrachloroethene	4.20	0.18	0.50	ug/l	5.00		84	70-130	10	30	
Toluene	4.81	0.29	0.50	ug/l	5.00		96	70-130	6	30	
trans-1,2-Dichloroethene	4.50	0.26	0.50	ug/l	5.00		90	70-130	16	30	
trans-1,3-Dichloropropene	4.81	0.32	0.50	ug/l	5.00		96	70-130	2	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0916 - EPA 524.2 (Continued)											
LCS Dup (W3J0916-BSD1)					Prepared & Analyzed: 10/11/23						
Trichloroethene	4.16	0.18	0.50	ug/l	5.00		83	70-130	7	30	
Trichlorofluoromethane	5.45	0.18	0.50	ug/l	5.00		109	70-130	5	30	
Vinyl chloride	5.95	0.18	0.50	ug/l	5.00		119	70-130	28	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.6			ug/l	50.0		105	70-130			
4-Bromofluorobenzene	51.5			ug/l	50.0		103	70-130			
Batch: W3J0917 - EPA 524.2											
Blank (W3J0917-BLK1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
Blank (W3J0917-BLK1)											
Prepared: 10/11/23 Analyzed: 10/12/23											
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
Blank (W3J0917-BLK1)											
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.5			ug/l	50.0		89	70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91	70-130			
LCS (W3J0917-BS1)											
Prepared: 10/11/23 Analyzed: 10/12/23											
1,1,1,2-Tetrachloroethane	4.65	0.24	0.50	ug/l	5.00		93	70-130			
1,1,1-Trichloroethane	4.43	0.26	0.50	ug/l	5.00		89	70-130			
1,1,2,2-Tetrachloroethane	4.66	0.20	0.50	ug/l	5.00		93	70-130			
1,1,2-Trichloroethane	4.82	0.19	0.50	ug/l	5.00		96	70-130			
1,1-Dichloroethane	5.09	0.27	0.50	ug/l	5.00		102	70-130			
1,1-Dichloroethene	5.21	0.16	0.50	ug/l	5.00		104	70-130			
1,1-Dichloropropene	4.61	0.14	0.50	ug/l	5.00		92	70-130			
1,2,3-Trichlorobenzene	4.07	0.40	0.50	ug/l	5.00		81	70-130			
1,2,3-Trichloropropane	4.69	0.22	0.50	ug/l	5.00		94	70-130			
1,2,4-Trichlorobenzene	4.35	0.17	0.50	ug/l	5.00		87	70-130			
1,2,4-Trimethylbenzene	4.67	0.20	0.50	ug/l	5.00		93	70-130			
1,2-Dichloroethane	4.55	0.24	0.50	ug/l	5.00		91	70-130			
1,2-Dichloropropane	4.54	0.13	0.50	ug/l	5.00		91	70-130			
1,3,5-Trimethylbenzene	4.63	0.17	0.50	ug/l	5.00		93	70-130			
1,3-Dichloropropane	4.84	0.27	0.50	ug/l	5.00		97	70-130			
2,2-Dichloropropane	4.05	0.17	0.50	ug/l	5.00		81	70-130			
2-Butanone	4.18	1.5	5.0	ug/l	5.00		84	70-130			J
2-Chlorotoluene	4.58	0.15	0.50	ug/l	5.00		92	70-130			
2-Hexanone	4.56	1.2	5.0	ug/l	5.00		91	70-130			J
4-Chlorotoluene	4.46	0.15	0.50	ug/l	5.00		89	70-130			
4-Methyl-2-pentanone	4.38	1.8	5.0	ug/l	5.00		88	70-130			J
Acetone	48.9	3.1	5.0	ug/l	50.0		98	70-130			
Benzene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.64	0.15	0.50	ug/l	5.00		93	70-130			
Bromochloromethane	4.97	0.15	0.50	ug/l	5.00		99	70-130			
Bromodichloromethane	4.43	0.24	0.50	ug/l	5.00		89	70-130			
Bromoform	4.34	0.38	0.50	ug/l	5.00		87	70-130			
Bromomethane	6.84	0.27	0.50	ug/l	5.00		137	70-130			Q-08
Carbon Disulfide	5.03	0.25	0.50	ug/l	5.00		101	70-130			
Carbon tetrachloride	4.43	0.27	0.50	ug/l	5.00		89	70-130			
Chlorobenzene	4.73	0.15	0.50	ug/l	5.00		95	70-130			
Chloroethane	6.51	0.17	0.50	ug/l	5.00		130	70-130			
Chloroform	4.96	0.27	0.50	ug/l	5.00		99	70-130			
Chloromethane	5.13	0.23	0.50	ug/l	5.00		103	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS (W3J0917-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
cis-1,2-Dichloroethene	4.74	0.25	0.50	ug/l	5.00		95	70-130			
cis-1,3-Dichloropropene	4.15	0.30	0.50	ug/l	5.00		83	70-130			
Dibromochloromethane	4.53	0.20	0.50	ug/l	5.00		91	70-130			
Dibromomethane	4.77	0.20	0.50	ug/l	5.00		95	70-130			
Dichlorodifluoromethane (Freon 12)	4.39	0.45	0.50	ug/l	5.00		88	70-130			
Di-isopropyl ether	20.4	1.1	2.0	ug/l	20.0		102	70-130			
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100	70-130			
Ethylbenzene	4.27	0.21	0.50	ug/l	5.00		85	70-130			
Freon 113	4.95	1.5	5.0	ug/l	5.00		99	70-130			J
Hexachlorobutadiene	4.29	0.40	0.50	ug/l	5.00		86	70-130			
Isopropylbenzene	4.47	0.18	0.50	ug/l	5.00		89	70-130			
m,p-Xylene	4.51	0.33	0.50	ug/l	5.00		90	70-130			
m-Dichlorobenzene	4.59	0.14	0.50	ug/l	5.00		92	70-130			
Methyl tert-butyl ether (MTBE)	18.6	0.94	2.0	ug/l	20.0		93	70-130			
Methylene chloride	4.91	0.30	0.50	ug/l	5.00		98	70-130			
Naphthalene	4.40	0.35	0.50	ug/l	5.00		88	70-130			
n-Butylbenzene	4.35	0.29	0.50	ug/l	5.00		87	70-130			
n-Propylbenzene	4.65	0.18	0.50	ug/l	5.00		93	70-130			
o-Dichlorobenzene	5.06	0.19	0.50	ug/l	5.00		101	70-130			
o-Xylene	4.75	0.20	0.50	ug/l	5.00		95	70-130			
p-Dichlorobenzene	4.98	0.18	0.50	ug/l	5.00		100	70-130			
p-Isopropyltoluene	4.60	0.25	0.50	ug/l	5.00		92	70-130			
sec-Butylbenzene	4.59	0.24	0.50	ug/l	5.00		92	70-130			
Styrene	4.73	0.19	0.50	ug/l	5.00		95	70-130			
Tert-amyl methyl ether	18.5	0.59	2.0	ug/l	20.0		92	70-130			
tert-Butylbenzene	4.55	0.18	0.50	ug/l	5.00		91	70-130			
Tetrachloroethene	4.18	0.18	0.50	ug/l	5.00		84	70-130			
Toluene	4.78	0.29	0.50	ug/l	5.00		96	70-130			
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100	70-130			
trans-1,3-Dichloropropene	4.57	0.32	0.50	ug/l	5.00		91	70-130			
Trichloroethene	4.21	0.18	0.50	ug/l	5.00		84	70-130			
Trichlorofluoromethane	5.91	0.18	0.50	ug/l	5.00		118	70-130			
Vinyl chloride	4.97	0.18	0.50	ug/l	5.00		99	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	51.5			ug/l	50.0		103	70-130			
LCS Dup (W3J0917-BSD1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.81	0.24	0.50	ug/l	5.00		116	70-130	22	30	
1,1,1-Trichloroethane	4.82	0.26	0.50	ug/l	5.00		96	70-130	9	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)											
						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,2,2-Tetrachloroethane	5.43	0.20	0.50	ug/l	5.00		109	70-130	15	30	
1,1,2-Trichloroethane	5.71	0.19	0.50	ug/l	5.00		114	70-130	17	30	
1,1-Dichloroethane	4.80	0.27	0.50	ug/l	5.00		96	70-130	6	30	
1,1-Dichloroethene	5.29	0.16	0.50	ug/l	5.00		106	70-130	1	30	
1,1-Dichloropropene	5.89	0.14	0.50	ug/l	5.00		118	70-130	24	30	
1,2,3-Trichlorobenzene	4.82	0.40	0.50	ug/l	5.00		96	70-130	17	30	
1,2,3-Trichloropropane	5.45	0.22	0.50	ug/l	5.00		109	70-130	15	30	
1,2,4-Trichlorobenzene	5.22	0.17	0.50	ug/l	5.00		104	70-130	18	30	
1,2,4-Trimethylbenzene	5.38	0.20	0.50	ug/l	5.00		108	70-130	14	30	
1,2-Dichloroethane	5.84	0.24	0.50	ug/l	5.00		117	70-130	25	30	
1,2-Dichloropropane	5.59	0.13	0.50	ug/l	5.00		112	70-130	21	30	
1,3,5-Trimethylbenzene	5.31	0.17	0.50	ug/l	5.00		106	70-130	14	30	
1,3-Dichloropropane	5.67	0.27	0.50	ug/l	5.00		113	70-130	16	30	
2,2-Dichloropropane	4.83	0.17	0.50	ug/l	5.00		97	70-130	18	30	
2-Butanone	4.92	1.5	5.0	ug/l	5.00		98	70-130	16	30	J
2-Chlorotoluene	5.14	0.15	0.50	ug/l	5.00		103	70-130	11	30	
2-Hexanone	5.27	1.2	5.0	ug/l	5.00		105	70-130	14	30	
4-Chlorotoluene	5.01	0.15	0.50	ug/l	5.00		100	70-130	12	30	
4-Methyl-2-pentanone	5.68	1.8	5.0	ug/l	5.00		114	70-130	26	30	
Acetone	51.5	3.1	5.0	ug/l	50.0		103	70-130	5	30	
Benzene	5.58	0.15	0.50	ug/l	5.00		112	70-130	18	30	
Bromobenzene	5.38	0.15	0.50	ug/l	5.00		108	70-130	15	30	
Bromochloromethane	4.16	0.15	0.50	ug/l	5.00		83	70-130	18	30	
Bromodichloromethane	5.77	0.24	0.50	ug/l	5.00		115	70-130	26	30	
Bromoform	5.26	0.38	0.50	ug/l	5.00		105	70-130	19	30	
Bromomethane	4.28	0.27	0.50	ug/l	5.00		86	70-130	46	30	A-01
Carbon Disulfide	4.80	0.25	0.50	ug/l	5.00		96	70-130	5	30	
Carbon tetrachloride	5.86	0.27	0.50	ug/l	5.00		117	70-130	28	30	
Chlorobenzene	5.54	0.15	0.50	ug/l	5.00		111	70-130	16	30	
Chloroethane	4.18	0.17	0.50	ug/l	5.00		84	70-130	44	30	Q-12
Chloroform	4.42	0.27	0.50	ug/l	5.00		88	70-130	12	30	
Chloromethane	4.20	0.23	0.50	ug/l	5.00		84	70-130	20	30	
cis-1,2-Dichloroethene	4.71	0.25	0.50	ug/l	5.00		94	70-130	0.5	30	
cis-1,3-Dichloropropene	5.46	0.30	0.50	ug/l	5.00		109	70-130	27	30	
Dibromochloromethane	5.34	0.20	0.50	ug/l	5.00		107	70-130	17	30	
Dibromomethane	5.44	0.20	0.50	ug/l	5.00		109	70-130	13	30	
Dichlorodifluoromethane (Freon 12)	5.04	0.45	0.50	ug/l	5.00		101	70-130	14	30	
Di-isopropyl ether	21.8	1.1	2.0	ug/l	20.0		109	70-130	6	30	
Ethyl tert-butyl ether	21.3	1.0	2.0	ug/l	20.0		107	70-130	7	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:29

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)											
					Prepared: 10/11/23 Analyzed: 10/12/23						
Ethylbenzene	5.23	0.21	0.50	ug/l	5.00		105	70-130	20	30	
Freon 113	5.51	1.5	5.0	ug/l	5.00		110	70-130	11	30	
Hexachlorobutadiene	5.03	0.40	0.50	ug/l	5.00		101	70-130	16	30	
Isopropylbenzene	5.26	0.18	0.50	ug/l	5.00		105	70-130	16	30	
m,p-Xylene	5.17	0.33	0.50	ug/l	5.00		103	70-130	14	30	
m-Dichlorobenzene	5.11	0.14	0.50	ug/l	5.00		102	70-130	11	30	
Methyl tert-butyl ether (MTBE)	20.8	0.94	2.0	ug/l	20.0		104	70-130	11	30	
Methylene chloride	4.68	0.30	0.50	ug/l	5.00		94	70-130	5	30	
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99	70-130	12	30	
n-Butylbenzene	5.14	0.29	0.50	ug/l	5.00		103	70-130	17	30	
n-Propylbenzene	5.28	0.18	0.50	ug/l	5.00		106	70-130	13	30	
o-Dichlorobenzene	5.48	0.19	0.50	ug/l	5.00		110	70-130	8	30	
o-Xylene	5.38	0.20	0.50	ug/l	5.00		108	70-130	12	30	
p-Dichlorobenzene	5.53	0.18	0.50	ug/l	5.00		111	70-130	10	30	
p-Isopropyltoluene	5.27	0.25	0.50	ug/l	5.00		105	70-130	14	30	
sec-Butylbenzene	5.24	0.24	0.50	ug/l	5.00		105	70-130	13	30	
Styrene	5.32	0.19	0.50	ug/l	5.00		106	70-130	12	30	
Tert-amyl methyl ether	24.1	0.59	2.0	ug/l	20.0		120	70-130	26	30	
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101	70-130	11	30	
Tetrachloroethene	5.27	0.18	0.50	ug/l	5.00		105	70-130	23	30	
Toluene	5.88	0.29	0.50	ug/l	5.00		118	70-130	21	30	
trans-1,2-Dichloroethene	4.85	0.26	0.50	ug/l	5.00		97	70-130	2	30	
trans-1,3-Dichloropropene	5.62	0.32	0.50	ug/l	5.00		112	70-130	21	30	
Trichloroethene	5.31	0.18	0.50	ug/l	5.00		106	70-130	23	30	
Trichlorofluoromethane	5.26	0.18	0.50	ug/l	5.00		105	70-130	12	30	
Vinyl chloride	4.46	0.18	0.50	ug/l	5.00		89	70-130	11	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.5			ug/l	50.0		105	70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:29

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
A-01	The RPD result exceeded the QC control limits. The batch was accepted based on acceptable LCSD & CCVs.
A-01a	The RPD results exceeded the QC control limits. The batch was accepted based on acceptable BS recovery.
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
J	Estimated conc. detected <MRL and >MDL.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
Q-11	This analyte is low bias in QC samples, sample result is suspect.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3306140**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: <u>ckindle@BrwnCald.com</u>		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindle		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com						Charges will apply for weekends/holidays	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	COMMENTS	
	10/3/23	15:04	G	PT-GAC6-811	9	X	X	X	X		
	10/3/23	15:53	G	PT-GAC17-811	9	X	X	X	X		
		15:10	G	PT-GAC16-S23	9	X	X	X	X		
		14:39	G	PT-GAC6-S23	9	X	X	X	X		
		12:05	G	PT-GAC5-S23	9	X	X	X	X		
		11:45	G	PT-GAC4-811	9	X	X	X	X		
		15:35	G	PT-GAC16-811	9	X	X	X	X		
		12:30	G	PT-GAC5-811	9	X	X	X	X		
		15:28	G	PT-GAC17-S23	9	X	X	X	X		
		11:45	G	PT-GAC4-811D	9	X	X	X	X		
		11:20	G	PT-GAC4-S23D	9	X	X	X	X		
		11:20	G	PT-GAC4-S23	9	X	X	X	X		

RELINQUISHED BY 	DATE / TIME 10/4/23 1:30	RECEIVED BY 	DATE / TIME 10-04-23 1:30	SAMPLE CONDITION: Actual Temperature: 4.9 °C	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge OW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY 	DATE / TIME 10-04-23 3:00	RECEIVED BY 	DATE / TIME 10/4/23 15:10	Received On Ice <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Preserved <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Evidence Seals Present <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Container Attacked <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N Preserved at Lab <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N	
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.

Client agrees to Terms & Conditions at: www.wecklabs.com

COO Version 04/13/2016



Sample Receipt Checklist

Weck WKO: **3106140**
 WKO Logged by: **Jaime Gomez**
 Samples Checked by: **Jaime Gomez**

Date/Time Received: **10/04/23 15:10**
 # of Samples: **12**
 Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC				
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		4.9 °C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH<2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: 10/06/23

Work Orders: 3J06171

Report Date: 10/17/2023

Project: COSM 97-005

Received Date: 10/04/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/04/23 with the Chain-of-Custody document. The samples were received in good condition, at 22.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Certificate of Analysis

FINAL REPORT

Project Number: COSM 97-005

Reported:

10/17/2023 15:03

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GS4-S4	Pet-Shin Wu	3J06171-01	Water	10/03/23 10:45	
PT-GS4-S8	Pet-Shin Wu	3J06171-02	Water	10/03/23 10:45	
PT-GS4-S4D	Pet-Shin Wu	3J06171-03	Water	10/03/23 10:45	
PT-GS4-S8D	Pet-Shin Wu	3J06171-04	Water	10/03/23 10:45	
PT-GS5-S4	Pet-Shin Wu	3J06171-05	Water	10/03/23 11:30	
PT-GS5-S8	Pet-Shin Wu	3J06171-06	Water	10/03/23 11:30	
PT-GS6-S4	Pet-Shin Wu	3J06171-07	Water	10/03/23 14:04	
PT-GS6-S8	Pet-Shin Wu	3J06171-08	Water	10/03/23 14:04	
PT-GS16-S4	Pet-Shin Wu	3J06171-09	Water	10/03/23 14:30	
PT-GS16-S8	Pet-Shin Wu	3J06171-10	Water	10/03/23 14:30	
PT-GS17-S4	Pet-Shin Wu	3J06171-11	Water	10/03/23 14:53	
PT-GS17-S8	Pet-Shin Wu	3J06171-12	Water	10/03/23 14:53	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/17/2023 15:03

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GS4-S4
3J06171-01 (Water) Sampled: 10/03/23 10:45 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.072	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	6.7	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.0072	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

Sample: PT-GS4-S8
3J06171-02 (Water) Sampled: 10/03/23 10:45 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

Sample: PT-GS4-S4D
3J06171-03 (Water) Sampled: 10/03/23 10:45 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.018	0.0065	0.030	mg/l	1	10/12/23	J
Manganese, Dissolved	4.2	2.7	5.0	ug/l	1	10/12/23	J
Manganese, Total	0.0048	0.00083	0.0050	mg/l	1	10/12/23	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/17/2023 15:03

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GS4-S8D
3J06171-04 (Water) Sampled: 10/03/23 10:45 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

(Continued)

Sample: PT-GS5-S4
3J06171-05 (Water) Sampled: 10/03/23 11:30 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.042	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	4.5	2.7	5.0	ug/l	1	10/12/23	J
Manganese, Total	0.0065	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

(Continued)

Sample: PT-GS5-S8
3J06171-06 (Water) Sampled: 10/03/23 11:30 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/17/2023 15:03

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GS6-S4
3J06171-07 (Water) Sampled: 10/03/23 14:04 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	3.9	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	5.4	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	0.36	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

(Continued)

Sample: PT-GS6-S8
3J06171-08 (Water) Sampled: 10/03/23 14:04 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	6.6	5.0	30	ug/l	1	10/12/23	J
Iron, Total	ND	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

(Continued)

Sample: PT-GS16-S4
3J06171-09 (Water) Sampled: 10/03/23 14:30 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	0.032	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	4.8	2.7	5.0	ug/l	1	10/12/23	J
Manganese, Total	0.0054	0.00083	0.0050	mg/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/17/2023 15:03

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GS16-S8
 3J06171-10 (Water) Sampled: 10/03/23 14:30 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1011		Preparation: EPA 200.2		Prepared: 10/11/23 11:59		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/12/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/12/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/12/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/12/23	

Sample Results

(Continued)

Sample: PT-GS17-S4
 3J06171-11 (Water) Sampled: 10/03/23 14:53 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1112		Preparation: EPA 200.2		Prepared: 10/12/23 09:44		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/16/23	
Iron, Total	0.019	0.0065	0.030	mg/l	1	10/16/23	J
Manganese, Dissolved	4.2	2.7	5.0	ug/l	1	10/16/23	J
Manganese, Total	0.0052	0.00083	0.0050	mg/l	1	10/16/23	

Sample Results

(Continued)

Sample: PT-GS17-S8
 3J06171-12 (Water) Sampled: 10/03/23 14:53 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1112		Preparation: EPA 200.2		Prepared: 10/12/23 09:44		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/16/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/16/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/16/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/16/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/17/2023 15:03

Project Manager: Brown & Caldwell

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1011 - EPA 200.7											
Blank (W3J1011-BLK1)					Prepared: 10/11/23 Analyzed: 10/12/23						
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W3J1011-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23						
Iron, Dissolved	208	5.0	30	ug/l	200		104	85-115			
Iron, Total	0.208	0.0065	0.030	mg/l	0.200		104	85-115			
Manganese, Dissolved	187	2.7	5.0	ug/l	200		94	85-115			
Manganese, Total	0.187	0.00083	0.0050	mg/l	0.200		94	85-115			
Matrix Spike (W3J1011-MS1)					Source: 3J06171-03 Prepared: 10/11/23 Analyzed: 10/12/23						
Iron, Dissolved	230	5.0	30	ug/l	200	ND	115	70-130			
Iron, Total	0.230	0.0065	0.030	mg/l	0.200	0.0183	106	70-130			
Manganese, Dissolved	192	2.7	5.0	ug/l	200	4.17	94	70-130			
Manganese, Total	0.192	0.00083	0.0050	mg/l	0.200	0.00476	94	70-130			
Matrix Spike (W3J1011-MS2)					Source: 3J06171-07 Prepared: 10/11/23 Analyzed: 10/12/23						
Iron, Total	4.24	0.0065	0.030	mg/l	0.200	3.90	168	70-130			MS-02
Manganese, Total	0.559	0.00083	0.0050	mg/l	0.200	0.361	99	70-130			
Matrix Spike Dup (W3J1011-MSD1)					Source: 3J06171-03 Prepared: 10/11/23 Analyzed: 10/12/23						
Iron, Dissolved	229	5.0	30	ug/l	200	ND	114	70-130	0.3	30	
Iron, Total	0.229	0.0065	0.030	mg/l	0.200	0.0183	105	70-130	0.3	30	
Manganese, Dissolved	192	2.7	5.0	ug/l	200	4.17	94	70-130	0.1	30	
Manganese, Total	0.192	0.00083	0.0050	mg/l	0.200	0.00476	94	70-130	0.1	30	
Matrix Spike Dup (W3J1011-MSD2)					Source: 3J06171-07 Prepared: 10/11/23 Analyzed: 10/12/23						
Iron, Total	3.99	0.0065	0.030	mg/l	0.200	3.90	42	70-130	6	30	MS-02
Manganese, Total	0.558	0.00083	0.0050	mg/l	0.200	0.361	99	70-130	0.06	30	
Batch: W3J1112 - EPA 200.7											
Blank (W3J1112-BLK1)					Prepared: 10/12/23 Analyzed: 10/16/23						
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W3J1112-BS1)					Prepared: 10/12/23 Analyzed: 10/16/23						
Iron, Dissolved	218	5.0	30	ug/l	200		109	85-115			
Iron, Total	0.218	0.0065	0.030	mg/l	0.200		109	85-115			
Manganese, Dissolved	194	2.7	5.0	ug/l	200		97	85-115			
Manganese, Total	0.194	0.00083	0.0050	mg/l	0.200		97	85-115			
Matrix Spike (W3J1112-MS1)					Source: 3I29017-02 Prepared: 10/12/23 Analyzed: 10/16/23						
Iron, Dissolved	275	5.0	30	ug/l	200	14.7	130	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/17/2023 15:03

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1112 - EPA 200.7 (Continued)											
Matrix Spike (W3J1112-MS1)			Source: 3I29017-02			Prepared: 10/12/23 Analyzed: 10/16/23					
Iron, Total	0.275	0.0065	0.030	mg/l	0.200	0.0147	130	70-130			
Manganese, Dissolved	196	2.7	5.0	ug/l	200	ND	98	70-130			
Manganese, Total	0.196	0.00083	0.0050	mg/l	0.200	ND	98	70-130			
Matrix Spike (W3J1112-MS2)			Source: 3J06171-11			Prepared: 10/12/23 Analyzed: 10/16/23					
Iron, Dissolved	231	5.0	30	ug/l	200	ND	116	70-130			
Iron, Total	0.231	0.0065	0.030	mg/l	0.200	0.0194	106	70-130			
Manganese, Dissolved	198	2.7	5.0	ug/l	200	4.19	97	70-130			
Manganese, Total	0.198	0.00083	0.0050	mg/l	0.200	0.00524	96	70-130			
Matrix Spike Dup (W3J1112-MSD1)			Source: 3I29017-02			Prepared: 10/12/23 Analyzed: 10/16/23					
Iron, Dissolved	228	5.0	30	ug/l	200	14.7	107	70-130	19	30	
Iron, Total	0.228	0.0065	0.030	mg/l	0.200	0.0147	107	70-130	19	30	
Manganese, Dissolved	193	2.7	5.0	ug/l	200	ND	97	70-130	1	30	
Manganese, Total	0.193	0.00083	0.0050	mg/l	0.200	ND	97	70-130	1	30	
Matrix Spike Dup (W3J1112-MSD2)			Source: 3J06171-11			Prepared: 10/12/23 Analyzed: 10/16/23					
Iron, Dissolved	236	5.0	30	ug/l	200	ND	118	70-130	2	30	
Iron, Total	0.236	0.0065	0.030	mg/l	0.200	0.0194	108	70-130	2	30	
Manganese, Dissolved	200	2.7	5.0	ug/l	200	4.19	98	70-130	0.7	30	
Manganese, Total	0.200	0.00083	0.0050	mg/l	0.200	0.00524	97	70-130	0.7	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/17/2023 15:03

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **350071**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		200.7 Fe, Total and Dissolved 200.8 Mn, Total and Dissolved				<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindle		SAMPLER <i>Per-Shin Wu</i>						Charges will apply for weekends/holidays	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved	ANALYSES REQUESTED										COMMENTS			
	10/3/23	10:45	GW	PT-GS4-S4	2	✓	✓														Analyze both Fe and Mn by EPA 200.7
	10/3/23	10:45	GW	PT-GS4-S8	2	✓	✓														
	10/3/23	10:45	GW	PT-GS4-S4D	2	✓	✓														
	10/3/23	10:45	GW	PT-GS4-S8D	2	✓	✓														
	10/3/23	11:30	GW	PT-GS5-S4	2	✓	✓														
	10/3/23	11:30	GW	PT-GS5-S8	2	✓	✓														
	10/3/23	14:04	GW	PT-GS6-S4	2	✓	✓														
	10/3/23	14:04	GW	PT-GS6-S8	2	✓	✓														
	10/3/23	14:30	GW	PT-GS16-S4	2	✓	✓														
	10/3/23	14:30	GW	PT-GS16-S8	2	✓	✓														
	10/3/23	14:53	GW	PT-GS17-S4	2	✓	✓														
	10/3/23	14:53	GW	PT-GS17-S8	2	✓	✓														

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/4/23 1:30	RECEIVED BY <i>[Signature]</i>	DATE / TIME 10-04-23 1:30	SAMPLE CONDITION: Actual Temperature: 22.1 T-0261 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10 04 23 3:00 PM	RECEIVED BY <i>[Signature]</i>	DATE / TIME 10/4/23 15:10		
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.

COC version 04/17/16



Sample Receipt Checklist

Weck WKO: 3J06171
 WKO Logged by: Jaime Gomez
 Samples Checked by: Jaime Gomez

Date/Time Received: 10/04/23 15:10
 # of Samples: 12
 Delivered by: GLS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		22.1 °C
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?				pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				AmI added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jaime Gomez

Date: 10/06/23

Work Orders: 3J09021

Report Date: 11/06/2023

Project: COSM 97-005

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

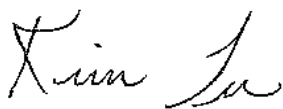
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-SW9-S4	Client	3J09021-01	Water	10/05/23 08:50	
PT-SW10-S4	Client	3J09021-02	Water	10/05/23 13:10	
PT-UV9-S10	Client	3J09021-03	Water	10/05/23 08:48	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFUnA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDoA	307-55-1		✓
PFTTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:46

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-SW9-S4
3J09021-01 (Water) Sampled: 10/05/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12						
Batch ID: W3J0920	Preparation: EPA 5030B						
Prepared: 10/11/23 07:43	Analyst: ADM						
1,2,3-Trichloropropane	0.022	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06						
Batch ID: W3J1656	Preparation: EPA 537/SPE						
Prepared: 10/19/23 08:20	Analyst: jna						
11CI-PF3OUdS	ND	0.46	1.7	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	10/24/23	
ADONA	ND	0.46	1.7	ng/l	1	10/24/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/24/23	
HFPO-DA	ND	0.72	1.7	ng/l	1	10/24/23	
MeFOSAA	ND	0.47	1.7	ng/l	1	10/24/23	
PFBS	3.4	0.48	1.7	ng/l	1	10/24/23	
PFDA	ND	0.37	1.7	ng/l	1	10/24/23	
PFDoA	ND	0.54	1.7	ng/l	1	10/24/23	
PFHpA	1.4	0.44	1.7	ng/l	1	10/24/23	J
PFHxA	6.4	0.40	1.7	ng/l	1	10/24/23	
PFHxS	3.3	0.49	1.7	ng/l	1	10/24/23	
PFNA	ND	0.43	1.7	ng/l	1	10/24/23	
PFOA	2.5	0.55	1.7	ng/l	1	10/24/23	
PFOS	ND	3.3	3.3	ng/l	1	10/24/23	R-01
PFTeDA	ND	0.37	1.7	ng/l	1	10/24/23	
PFTrDA	ND	0.34	1.7	ng/l	1	10/24/23	
PFUnA	ND	0.39	1.7	ng/l	1	10/24/23	

Surrogate(s)

13C2-PFDA	103%	Conc: 33.9	70-130	10/24/23	
13C2-PFHxA	98%	Conc: 32.2	70-130	10/24/23	
d5-EtFOSAA	164%	Conc: 216	70-130	10/24/23	S-GC
HFPO-DA-13C3	94%	Conc: 31.1	70-130	10/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2	Instr: GCMS08						
Batch ID: W3J0917	Preparation: EPA 5030B						
Prepared: 10/11/23 12:05	Analyst: ADM						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.58	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	2.8	0.16	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW9-S4
3J09021-01 (Water) Sampled: 10/05/23 8:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2							
Instr: GCMS08							
Batch ID: W3J0917							
Preparation: EPA 5030B							
Prepared: 10/11/23 12:05							
Analyst: ADM							
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.64	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	4.7	0.27	0.50	ug/l	1	10/12/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	1.0	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW9-S4
3J09021-01 (Water) Sampled: 10/05/23 8:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	14	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	4.7		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	35	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	0.20	0.18	0.50	ug/l	1	10/12/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
Surrogate(s)							
1,2-Dichlorobenzene-d4	85%	Conc: 42.4	70-130			10/12/23	
4-Bromofluorobenzene	89%	Conc: 44.6	70-130			10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-SW9-S4
 3J09021-01RE1 (Water) Sampled: 10/05/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J1092		Preparation: EPA 522/SPE		Prepared: 10/12/23 08:06		Analyst: mld	
1,4-Dioxane	25	1.4	3.5	ug/l	50	10/17/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	88%	Conc: 9.08	70-130			10/17/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW10-S4
3J09021-02 (Water) Sampled: 10/05/23 13:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522		Instr: GCMS20					
Batch ID: W3J1092	Preparation: EPA 522/SPE	Prepared: 10/12/23 08:06					
1,4-Dioxane	3.2	0.028	0.070	ug/l	1	10/16/23	Analyst: mld
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	98%	Conc: 9.98	70-130			10/16/23	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 5310B		Instr: TOC02				
Batch ID: W3J1252	Preparation: _NONE (TOC/TOX)	Prepared: 10/13/23 15:02				
Total Organic Carbon (TOC)	0.41	0.30	mg/l	1	10/15/23	Analyst: rem

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12					
Batch ID: W3J0920	Preparation: EPA 5030B	Prepared: 10/11/23 07:43					
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	Analyst: ADM

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06					
Batch ID: W3J1656	Preparation: EPA 537/SPE	Prepared: 10/19/23 08:20					
11CI-PF3OUdS	ND	0.46	1.7	ng/l	1	10/24/23	Analyst: jna
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	10/24/23	
ADONA	ND	0.46	1.7	ng/l	1	10/24/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/24/23	
HFPO-DA	ND	0.72	1.7	ng/l	1	10/24/23	
MeFOSAA	ND	0.47	1.7	ng/l	1	10/24/23	
PFBS	6.7	0.48	1.7	ng/l	1	10/24/23	
PFDA	ND	0.37	1.7	ng/l	1	10/24/23	
PFDoA	ND	0.54	1.7	ng/l	1	10/24/23	
PFHpA	2.3	0.44	1.7	ng/l	1	10/24/23	
PFHxA	11	0.40	1.7	ng/l	1	10/24/23	
PFHxS	5.5	0.49	1.7	ng/l	1	10/24/23	
PFNA	ND	0.43	1.7	ng/l	1	10/24/23	
PFOA	4.5	0.55	1.7	ng/l	1	10/24/23	
PFOS	ND	0.44	1.7	ng/l	1	10/24/23	
PFTeDA	ND	0.37	1.7	ng/l	1	10/24/23	
PFTTrDA	ND	0.34	1.7	ng/l	1	10/24/23	
PFUnA	ND	0.39	1.7	ng/l	1	10/24/23	
<i>Surrogate(s)</i>							
13C2-PFDA	95%	Conc: 31.2	70-130			10/24/23	
13C2-PFHxA	101%	Conc: 33.2	70-130			10/24/23	
d5-EtFOSAA	102%	Conc: 134	70-130			10/24/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW10-S4
3J09021-02 (Water) Sampled: 10/05/23 13:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W3J1656		Preparation: EPA 537/SPE		Prepared: 10/19/23 08:20		Analyst: jna	
HFPO-DA-13C3	93%	Conc: 30.8	70-130			10/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-SW10-S4
3J09021-02 (Water) Sampled: 10/05/23 13:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	0.92	0.27	0.50	ug/l	1	10/12/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	28	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	0.92		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-SW10-S4
 3J09021-02 (Water) Sampled: 10/05/23 13:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	0.84	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	87%	Conc: 43.4	70-130			10/12/23	
4-Bromofluorobenzene	87%	Conc: 43.6	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV9-S10
3J09021-03 (Water) Sampled: 10/05/23 8:48 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0920	Preparation: EPA 5030B			Prepared: 10/11/23 07:43	Analyst: ADM		
1,2,3-Trichloropropane	0.011	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1656	Preparation: EPA 537/SPE			Prepared: 10/19/23 08:20	Analyst: jna		
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/24/23	
ADONA	ND	0.48	1.7	ng/l	1	10/24/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/24/23	
HFPO-DA	ND	0.76	1.7	ng/l	1	10/24/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/24/23	
PFBS	3.4	0.50	1.7	ng/l	1	10/24/23	
PFDA	ND	0.39	1.7	ng/l	1	10/24/23	
PFDoA	ND	0.57	1.7	ng/l	1	10/24/23	
PFHpA	1.4	0.46	1.7	ng/l	1	10/24/23	J
PFHxA	6.2	0.42	1.7	ng/l	1	10/24/23	
PFHxS	3.4	0.52	1.7	ng/l	1	10/24/23	
PFNA	ND	0.45	1.7	ng/l	1	10/24/23	
PFOA	2.6	0.58	1.7	ng/l	1	10/24/23	
PFOS	ND	0.46	1.7	ng/l	1	10/24/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/24/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/24/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/24/23	

Surrogate(s)	Conc:	70-130	10/24/23
13C2-PFDA	100%	34.8	10/24/23
13C2-PFHxA	94%	32.5	10/24/23
d5-EtFOSAA	108%	150	10/24/23
HFPO-DA-13C3	92%	31.8	10/24/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J1092 - EPA 522											
Blank (W3J1092-BLK1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.40			ug/l	10.0		74	70-130			
LCS (W3J1092-BS1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	0.0654	0.028	0.070	ug/l	0.0600		109	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.15			ug/l	10.0		91	70-130			
LCS Dup (W3J1092-BSD1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	0.0694	0.028	0.070	ug/l	0.0600		116	50-150	6	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.38			ug/l	10.0		94	70-130			

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J1252 - SM 5310B											
Blank (W3J1252-BLK1)					Prepared: 10/13/23 Analyzed: 10/15/23						
Total Organic Carbon (TOC)	ND		0.30	mg/l							
LCS (W3J1252-BS1)					Prepared: 10/13/23 Analyzed: 10/15/23						
Total Organic Carbon (TOC)	0.954		0.30	mg/l	1.00		95	85-115			
Matrix Spike (W3J1252-MS1)					Prepared: 10/13/23 Analyzed: 10/15/23						
Total Organic Carbon (TOC)	6.24		0.30	mg/l	5.00	1.04	104	76-115			
Matrix Spike Dup (W3J1252-MSD1)					Prepared: 10/13/23 Analyzed: 10/15/23						
Total Organic Carbon (TOC)	6.28		0.30	mg/l	5.00	1.04	105	76-115	0.8	20	

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0920 - SRL 524M-TCP											
Blank (W3J0920-BLK1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W3J0920-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	0.0188	0.0012	0.0050	ug/l	0.0200		94	80-120			
LCS Dup (W3J0920-BSD1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	0.0190	0.0012	0.0050	ug/l	0.0200		95	80-120	1	20	
Duplicate (W3J0920-DUP1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	0.0237	0.0012	0.0050	ug/l		0.0218			8	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1656 - EPA 537.1											
Blank (W3J1656-BLK1)						Prepared: 10/19/23 Analyzed: 10/24/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	40.0			ng/l	40.0		100	70-130			
13C2-PFHxA	41.1			ng/l	40.0		103	70-130			
d5-EtFOSAA	157			ng/l	160		98	70-130			
HFPO-DA-13C3	38.4			ng/l	40.0		96	70-130			
LCS (W3J1656-BS1)						Prepared: 10/19/23 Analyzed: 10/24/23					
11CI-PF3OUdS	75.3	0.56	2.0	ng/l	80.0		94	70-130			
9CI-PF3ONS	80.3	0.53	2.0	ng/l	80.0		100	70-130			
ADONA	77.1	0.55	2.0	ng/l	80.0		96	70-130			
EtFOSAA	69.1	0.48	2.0	ng/l	80.0		86	70-130			
HFPO-DA	66.9	0.87	2.0	ng/l	80.0		84	70-130			
MeFOSAA	75.7	0.58	2.0	ng/l	80.0		95	70-130			
PFBS	85.4	0.58	2.0	ng/l	80.0		107	70-130			
PFDA	71.6	0.45	2.0	ng/l	80.0		90	70-130			
PFDoA	75.2	0.66	2.0	ng/l	80.0		94	70-130			
PFHpA	80.2	0.53	2.0	ng/l	80.0		100	70-130			
PFHxA	78.1	0.49	2.0	ng/l	80.0		98	70-130			
PFHxS	84.7	0.59	2.0	ng/l	80.0		106	70-130			
PFNA	79.1	0.52	2.0	ng/l	80.0		99	70-130			
PFOA	81.6	0.67	2.0	ng/l	80.0		102	70-130			
PFOS	82.9	0.53	2.0	ng/l	80.0		104	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1656 - EPA 537.1 (Continued)											
LCS (W3J1656-BS1)						Prepared: 10/19/23 Analyzed: 10/24/23					
PFTeDA	79.1	0.45	2.0	ng/l	80.0		99	70-130			
PFTTrDA	67.7	0.42	2.0	ng/l	80.0		85	70-130			
PFUnA	76.2	0.48	2.0	ng/l	80.0		95	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	40.6			ng/l	40.0		102	70-130			
13C2-PFHxA	42.0			ng/l	40.0		105	70-130			
d5-EtFOSAA	150			ng/l	160		94	70-130			
HFPO-DA-13C3	36.5			ng/l	40.0		91	70-130			
LCS Dup (W3J1656-BS1)						Prepared: 10/19/23 Analyzed: 10/24/23					
11CI-PF3OUdS	79.6	0.56	2.0	ng/l	80.0		100	70-130	6	30	
9CI-PF3ONS	81.0	0.53	2.0	ng/l	80.0		101	70-130	0.9	30	
ADONA	77.7	0.55	2.0	ng/l	80.0		97	70-130	0.7	30	
EtFOSAA	79.6	0.48	2.0	ng/l	80.0		100	70-130	14	30	
HFPO-DA	68.6	0.87	2.0	ng/l	80.0		86	70-130	3	30	
MeFOSAA	80.6	0.58	2.0	ng/l	80.0		101	70-130	6	30	
PFBS	84.2	0.58	2.0	ng/l	80.0		105	70-130	1	30	
PFDA	71.9	0.45	2.0	ng/l	80.0		90	70-130	0.3	30	
PFDoA	74.7	0.66	2.0	ng/l	80.0		93	70-130	0.7	30	
PFHpA	79.5	0.53	2.0	ng/l	80.0		99	70-130	0.9	30	
PFHxA	77.9	0.49	2.0	ng/l	80.0		97	70-130	0.3	30	
PFHxS	84.1	0.59	2.0	ng/l	80.0		105	70-130	0.7	30	
PFNA	78.0	0.52	2.0	ng/l	80.0		97	70-130	1	30	
PFOA	79.2	0.67	2.0	ng/l	80.0		99	70-130	3	30	
PFOS	81.4	0.53	2.0	ng/l	80.0		102	70-130	2	30	
PFTeDA	81.6	0.45	2.0	ng/l	80.0		102	70-130	3	30	
PFTTrDA	71.9	0.42	2.0	ng/l	80.0		90	70-130	6	30	
PFUnA	77.5	0.48	2.0	ng/l	80.0		97	70-130	2	30	
<i>Surrogate(s)</i>											
13C2-PFDA	41.0			ng/l	40.0		102	70-130			
13C2-PFHxA	41.9			ng/l	40.0		105	70-130			
d5-EtFOSAA	170			ng/l	160		107	70-130			
HFPO-DA-13C3	38.2			ng/l	40.0		96	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike	Source	%REC	RPD	RPD	Limit	Qualifier
					Level	Result	%REC	Limits	RPD	Limit	
Batch: W3J0917 - EPA 524.2											
Blank (W3J0917-BLK1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l						70-130	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l						70-130	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l						70-130	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l						70-130	
1,1-Dichloroethane	ND	0.27	0.50	ug/l						70-130	
1,1-Dichloroethene	ND	0.16	0.50	ug/l						70-130	
1,1-Dichloropropene	ND	0.14	0.50	ug/l						70-130	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l						70-130	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l						70-130	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l						70-130	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l						70-130	
1,2-Dichloroethane	ND	0.24	0.50	ug/l						70-130	
1,2-Dichloropropane	ND	0.13	0.50	ug/l						70-130	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l						70-130	
1,3-Dichloropropane	ND	0.27	0.50	ug/l						70-130	
1,3-Dichloropropene, Total	ND		0.50	ug/l						70-130	
2,2-Dichloropropane	ND	0.17	0.50	ug/l						70-130	
2-Butanone	ND	1.5	5.0	ug/l						70-130	
2-Chlorotoluene	ND	0.15	0.50	ug/l						70-130	
2-Hexanone	ND	1.2	5.0	ug/l						70-130	
4-Chlorotoluene	ND	0.15	0.50	ug/l						70-130	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l						70-130	
Acetone	ND	3.1	5.0	ug/l						70-130	
Acrylonitrile	ND	1.5	2.0	ug/l						70-130	
Benzene	ND	0.15	0.50	ug/l						70-130	
Bromobenzene	ND	0.15	0.50	ug/l						70-130	
Bromochloromethane	ND	0.15	0.50	ug/l						70-130	
Bromodichloromethane	ND	0.24	0.50	ug/l						70-130	
Bromoform	ND	0.38	0.50	ug/l						70-130	
Bromomethane	ND	0.27	0.50	ug/l						70-130	
Carbon Disulfide	ND	0.25	0.50	ug/l						70-130	
Carbon tetrachloride	ND	0.27	0.50	ug/l						70-130	
Chlorobenzene	ND	0.15	0.50	ug/l						70-130	
Chloroethane	ND	0.17	0.50	ug/l						70-130	
Chloroform	ND	0.27	0.50	ug/l						70-130	
Chloromethane	ND	0.23	0.50	ug/l						70-130	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l						70-130	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l						70-130	
Dibromochloromethane	ND	0.20	0.50	ug/l						70-130	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
Blank (W3J0917-BLK1)						Prepared: 10/11/23 Analyzed: 10/12/23					
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.5			ug/l	50.0		89	70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91	70-130			
LCS (W3J0917-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	4.65	0.24	0.50	ug/l	5.00		93	70-130			
1,1,1-Trichloroethane	4.43	0.26	0.50	ug/l	5.00		89	70-130			
1,1,2,2-Tetrachloroethane	4.66	0.20	0.50	ug/l	5.00		93	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)										
LCS (W3J0917-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,2-Trichloroethane	4.82	0.19	0.50	ug/l	5.00		96 70-130			
1,1-Dichloroethane	5.09	0.27	0.50	ug/l	5.00		102 70-130			
1,1-Dichloroethene	5.21	0.16	0.50	ug/l	5.00		104 70-130			
1,1-Dichloropropene	4.61	0.14	0.50	ug/l	5.00		92 70-130			
1,2,3-Trichlorobenzene	4.07	0.40	0.50	ug/l	5.00		81 70-130			
1,2,3-Trichloropropane	4.69	0.22	0.50	ug/l	5.00		94 70-130			
1,2,4-Trichlorobenzene	4.35	0.17	0.50	ug/l	5.00		87 70-130			
1,2,4-Trimethylbenzene	4.67	0.20	0.50	ug/l	5.00		93 70-130			
1,2-Dichloroethane	4.55	0.24	0.50	ug/l	5.00		91 70-130			
1,2-Dichloropropane	4.54	0.13	0.50	ug/l	5.00		91 70-130			
1,3,5-Trimethylbenzene	4.63	0.17	0.50	ug/l	5.00		93 70-130			
1,3-Dichloropropane	4.84	0.27	0.50	ug/l	5.00		97 70-130			
2,2-Dichloropropane	4.05	0.17	0.50	ug/l	5.00		81 70-130			
2-Butanone	4.18	1.5	5.0	ug/l	5.00		84 70-130			J
2-Chlorotoluene	4.58	0.15	0.50	ug/l	5.00		92 70-130			
2-Hexanone	4.56	1.2	5.0	ug/l	5.00		91 70-130			J
4-Chlorotoluene	4.46	0.15	0.50	ug/l	5.00		89 70-130			
4-Methyl-2-pentanone	4.38	1.8	5.0	ug/l	5.00		88 70-130			J
Acetone	48.9	3.1	5.0	ug/l	50.0		98 70-130			
Benzene	4.66	0.15	0.50	ug/l	5.00		93 70-130			
Bromobenzene	4.64	0.15	0.50	ug/l	5.00		93 70-130			
Bromochloromethane	4.97	0.15	0.50	ug/l	5.00		99 70-130			
Bromodichloromethane	4.43	0.24	0.50	ug/l	5.00		89 70-130			
Bromoform	4.34	0.38	0.50	ug/l	5.00		87 70-130			
Bromomethane	6.84	0.27	0.50	ug/l	5.00		137 70-130			Q-08
Carbon Disulfide	5.03	0.25	0.50	ug/l	5.00		101 70-130			
Carbon tetrachloride	4.43	0.27	0.50	ug/l	5.00		89 70-130			
Chlorobenzene	4.73	0.15	0.50	ug/l	5.00		95 70-130			
Chloroethane	6.51	0.17	0.50	ug/l	5.00		130 70-130			
Chloroform	4.96	0.27	0.50	ug/l	5.00		99 70-130			
Chloromethane	5.13	0.23	0.50	ug/l	5.00		103 70-130			
cis-1,2-Dichloroethene	4.74	0.25	0.50	ug/l	5.00		95 70-130			
cis-1,3-Dichloropropene	4.15	0.30	0.50	ug/l	5.00		83 70-130			
Dibromochloromethane	4.53	0.20	0.50	ug/l	5.00		91 70-130			
Dibromomethane	4.77	0.20	0.50	ug/l	5.00		95 70-130			
Dichlorodifluoromethane (Freon 12)	4.39	0.45	0.50	ug/l	5.00		88 70-130			
Di-isopropyl ether	20.4	1.1	2.0	ug/l	20.0		102 70-130			
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100 70-130			
Ethylbenzene	4.27	0.21	0.50	ug/l	5.00		85 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)										
LCS (W3J0917-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23					
Freon 113	4.95	1.5	5.0	ug/l	5.00		99 70-130			J
Hexachlorobutadiene	4.29	0.40	0.50	ug/l	5.00		86 70-130			
Isopropylbenzene	4.47	0.18	0.50	ug/l	5.00		89 70-130			
m,p-Xylene	4.51	0.33	0.50	ug/l	5.00		90 70-130			
m-Dichlorobenzene	4.59	0.14	0.50	ug/l	5.00		92 70-130			
Methyl tert-butyl ether (MTBE)	18.6	0.94	2.0	ug/l	20.0		93 70-130			
Methylene chloride	4.91	0.30	0.50	ug/l	5.00		98 70-130			
Naphthalene	4.40	0.35	0.50	ug/l	5.00		88 70-130			
n-Butylbenzene	4.35	0.29	0.50	ug/l	5.00		87 70-130			
n-Propylbenzene	4.65	0.18	0.50	ug/l	5.00		93 70-130			
o-Dichlorobenzene	5.06	0.19	0.50	ug/l	5.00		101 70-130			
o-Xylene	4.75	0.20	0.50	ug/l	5.00		95 70-130			
p-Dichlorobenzene	4.98	0.18	0.50	ug/l	5.00		100 70-130			
p-Isopropyltoluene	4.60	0.25	0.50	ug/l	5.00		92 70-130			
sec-Butylbenzene	4.59	0.24	0.50	ug/l	5.00		92 70-130			
Styrene	4.73	0.19	0.50	ug/l	5.00		95 70-130			
Tert-amyl methyl ether	18.5	0.59	2.0	ug/l	20.0		92 70-130			
tert-Butylbenzene	4.55	0.18	0.50	ug/l	5.00		91 70-130			
Tetrachloroethene	4.18	0.18	0.50	ug/l	5.00		84 70-130			
Toluene	4.78	0.29	0.50	ug/l	5.00		96 70-130			
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100 70-130			
trans-1,3-Dichloropropene	4.57	0.32	0.50	ug/l	5.00		91 70-130			
Trichloroethene	4.21	0.18	0.50	ug/l	5.00		84 70-130			
Trichlorofluoromethane	5.91	0.18	0.50	ug/l	5.00		118 70-130			
Vinyl chloride	4.97	0.18	0.50	ug/l	5.00		99 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106 70-130			
4-Bromofluorobenzene	51.5			ug/l	50.0		103 70-130			
LCS Dup (W3J0917-BSD1)					Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.81	0.24	0.50	ug/l	5.00		116 70-130	22	30	
1,1,1-Trichloroethane	4.82	0.26	0.50	ug/l	5.00		96 70-130	9	30	
1,1,2,2-Tetrachloroethane	5.43	0.20	0.50	ug/l	5.00		109 70-130	15	30	
1,1,2-Trichloroethane	5.71	0.19	0.50	ug/l	5.00		114 70-130	17	30	
1,1-Dichloroethane	4.80	0.27	0.50	ug/l	5.00		96 70-130	6	30	
1,1-Dichloroethene	5.29	0.16	0.50	ug/l	5.00		106 70-130	1	30	
1,1-Dichloropropene	5.89	0.14	0.50	ug/l	5.00		118 70-130	24	30	
1,2,3-Trichlorobenzene	4.82	0.40	0.50	ug/l	5.00		96 70-130	17	30	
1,2,3-Trichloropropane	5.45	0.22	0.50	ug/l	5.00		109 70-130	15	30	
1,2,4-Trichlorobenzene	5.22	0.17	0.50	ug/l	5.00		104 70-130	18	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)											
					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,4-Trimethylbenzene	5.38	0.20	0.50	ug/l	5.00		108	70-130	14	30	
1,2-Dichloroethane	5.84	0.24	0.50	ug/l	5.00		117	70-130	25	30	
1,2-Dichloropropane	5.59	0.13	0.50	ug/l	5.00		112	70-130	21	30	
1,3,5-Trimethylbenzene	5.31	0.17	0.50	ug/l	5.00		106	70-130	14	30	
1,3-Dichloropropane	5.67	0.27	0.50	ug/l	5.00		113	70-130	16	30	
2,2-Dichloropropane	4.83	0.17	0.50	ug/l	5.00		97	70-130	18	30	
2-Butanone	4.92	1.5	5.0	ug/l	5.00		98	70-130	16	30	J
2-Chlorotoluene	5.14	0.15	0.50	ug/l	5.00		103	70-130	11	30	
2-Hexanone	5.27	1.2	5.0	ug/l	5.00		105	70-130	14	30	
4-Chlorotoluene	5.01	0.15	0.50	ug/l	5.00		100	70-130	12	30	
4-Methyl-2-pentanone	5.68	1.8	5.0	ug/l	5.00		114	70-130	26	30	
Acetone	51.5	3.1	5.0	ug/l	50.0		103	70-130	5	30	
Benzene	5.58	0.15	0.50	ug/l	5.00		112	70-130	18	30	
Bromobenzene	5.38	0.15	0.50	ug/l	5.00		108	70-130	15	30	
Bromochloromethane	4.16	0.15	0.50	ug/l	5.00		83	70-130	18	30	
Bromodichloromethane	5.77	0.24	0.50	ug/l	5.00		115	70-130	26	30	
Bromoform	5.26	0.38	0.50	ug/l	5.00		105	70-130	19	30	
Bromomethane	4.28	0.27	0.50	ug/l	5.00		86	70-130	46	30	A-01
Carbon Disulfide	4.80	0.25	0.50	ug/l	5.00		96	70-130	5	30	
Carbon tetrachloride	5.86	0.27	0.50	ug/l	5.00		117	70-130	28	30	
Chlorobenzene	5.54	0.15	0.50	ug/l	5.00		111	70-130	16	30	
Chloroethane	4.18	0.17	0.50	ug/l	5.00		84	70-130	44	30	Q-12
Chloroform	4.42	0.27	0.50	ug/l	5.00		88	70-130	12	30	
Chloromethane	4.20	0.23	0.50	ug/l	5.00		84	70-130	20	30	
cis-1,2-Dichloroethene	4.71	0.25	0.50	ug/l	5.00		94	70-130	0.5	30	
cis-1,3-Dichloropropene	5.46	0.30	0.50	ug/l	5.00		109	70-130	27	30	
Dibromochloromethane	5.34	0.20	0.50	ug/l	5.00		107	70-130	17	30	
Dibromomethane	5.44	0.20	0.50	ug/l	5.00		109	70-130	13	30	
Dichlorodifluoromethane (Freon 12)	5.04	0.45	0.50	ug/l	5.00		101	70-130	14	30	
Di-isopropyl ether	21.8	1.1	2.0	ug/l	20.0		109	70-130	6	30	
Ethyl tert-butyl ether	21.3	1.0	2.0	ug/l	20.0		107	70-130	7	30	
Ethylbenzene	5.23	0.21	0.50	ug/l	5.00		105	70-130	20	30	
Freon 113	5.51	1.5	5.0	ug/l	5.00		110	70-130	11	30	
Hexachlorobutadiene	5.03	0.40	0.50	ug/l	5.00		101	70-130	16	30	
Isopropylbenzene	5.26	0.18	0.50	ug/l	5.00		105	70-130	16	30	
m,p-Xylene	5.17	0.33	0.50	ug/l	5.00		103	70-130	14	30	
m-Dichlorobenzene	5.11	0.14	0.50	ug/l	5.00		102	70-130	11	30	
Methyl tert-butyl ether (MTBE)	20.8	0.94	2.0	ug/l	20.0		104	70-130	11	30	
Methylene chloride	4.68	0.30	0.50	ug/l	5.00		94	70-130	5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)											
					Prepared: 10/11/23 Analyzed: 10/12/23						
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99	70-130	12	30	
n-Butylbenzene	5.14	0.29	0.50	ug/l	5.00		103	70-130	17	30	
n-Propylbenzene	5.28	0.18	0.50	ug/l	5.00		106	70-130	13	30	
o-Dichlorobenzene	5.48	0.19	0.50	ug/l	5.00		110	70-130	8	30	
o-Xylene	5.38	0.20	0.50	ug/l	5.00		108	70-130	12	30	
p-Dichlorobenzene	5.53	0.18	0.50	ug/l	5.00		111	70-130	10	30	
p-Isopropyltoluene	5.27	0.25	0.50	ug/l	5.00		105	70-130	14	30	
sec-Butylbenzene	5.24	0.24	0.50	ug/l	5.00		105	70-130	13	30	
Styrene	5.32	0.19	0.50	ug/l	5.00		106	70-130	12	30	
Tert-amyl methyl ether	24.1	0.59	2.0	ug/l	20.0		120	70-130	26	30	
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101	70-130	11	30	
Tetrachloroethene	5.27	0.18	0.50	ug/l	5.00		105	70-130	23	30	
Toluene	5.88	0.29	0.50	ug/l	5.00		118	70-130	21	30	
trans-1,2-Dichloroethene	4.85	0.26	0.50	ug/l	5.00		97	70-130	2	30	
trans-1,3-Dichloropropene	5.62	0.32	0.50	ug/l	5.00		112	70-130	21	30	
Trichloroethene	5.31	0.18	0.50	ug/l	5.00		106	70-130	23	30	
Trichlorofluoromethane	5.26	0.18	0.50	ug/l	5.00		105	70-130	12	30	
Vinyl chloride	4.46	0.18	0.50	ug/l	5.00		89	70-130	11	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.5			ug/l	50.0		105	70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:46

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
A-01	The RPD result exceeded the QC control limits. The batch was accepted based on acceptable LCSD & CCVs.
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
R-01	The MDL and/or MRL for this analyte has been raised to account for matrix interference.
S-GC	Surrogate recovery outside of control limits due to a possible matrix effect. The data was accepted based on valid recovery of the remaining surrogate.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3J09021**

Page **1** Of **1**

CLIENT NAME:
Brown and Caldwell - Los Angeles

PROJECT:
COSM 97-005

ADDRESS:
1000 Wilshire Boulevard, Suite 1690
Los Angeles, CA 90018

PHONE:
ckindle@BrwnCald.com

invoice to Rose Ford, Rford@BrwnCald.com

PROJECT MANAGER
Chris Kindle

SAMPLER

ANALYSES REQUESTED

EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TPH	532.1 PFOA	TOC
X	X	X	X	
X	X	X	X	X
		X	X	

SPECIAL HANDLING

- Same Day Rush 150%
- 24 Hour Rush 100%
- 48-72 Hour Rush 75%
- 4 - 5 Day Rush 30%
- Rush Extractions 50%
- 10 - 15 Business Days
- QA/QC Data Package

Charges will apply for weekends/holidays

Method of Shipment:

COMMENTS

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP. TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.
	10/5	8:50	G	PT-SW9-S4	9
	10/5	13:10	G	PT-SW10-S4	11
	10/5	8:48	G	PT-UV9-810	4

RELINQUISHED BY
[Signature]

DATE / TIME
10/5/23 2:30

RECEIVED BY
[Signature]

SAMPLE CONDITION:

Actual Temperature: **4.0**
 Received On Ice **Y**
 Preserved **Y**
 Evidence Seals Present **Y**
 Container Attacked **Y**
 Preserved at Lab **Y**

SAMPLE TYPE CODE:

- AQ=Aqueous
- NA= Non Aqueous
- SL = Sludge
- DW = Drinking Water
- WW = Waste Water
- RW = Rain Water
- GW = Ground Water
- SO = Soil
- SW = Solid Waste
- OL = Oil
- OT = Other Matrix

RELINQUISHED BY
[Signature]

DATE / TIME
10/5/23 4:10

RECEIVED BY
[Signature]
16:14
10/5/23

RELINQUISHED BY

DATE / TIME

RECEIVED BY

PRE-SCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.

Client agrees to Terms & Conditions at: www.wecklabs.com



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **3109021**

Date/Time Received: **10/5/2023**

WKO Logged by: **Jerald Ancheta**

of Samples: **3**

Samples Checked by: **Jerico Bolotano**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC				
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4.9°C
Ice Type (Blue/Wet)				Wet
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Receipt Information				
Sample Labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cl Test Strip Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading: Acid Lot#
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ant added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jerald Ancheta*

Date: **10/9/2023**

Work Orders: 3J09026

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 10/19/2023

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

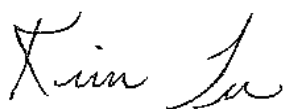
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Certificate of Analysis

FINAL REPORT

Reported:
10/19/2023 18:12

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV9-S9	Client	3J09026-01	Water	10/05/23 08:48	
PT-UV9-S9D	Client	3J09026-02	Water	10/05/23 08:48	
PT-UV9-S10	Client	3J09026-03	Water	10/05/23 08:48	
PT-UV9-S10D	Client	3J09026-04	Water	10/05/23 08:48	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:12

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV9-S9
3J09026-01 (Water) Sampled: 10/05/23 8:48 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.55	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	2.9	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.52	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.5	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV9-S9
3J09026-01 (Water) Sampled: 10/05/23 8:48 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	0.25	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	0.92	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	16	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.5		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	33	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV9-S9
3J09026-01 (Water) Sampled: 10/05/23 8:48 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0917 **Preparation:** EPA 5030B **Prepared:** 10/11/23 12:05 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	82%	Conc: 40.9	70-130			10/12/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	86%	Conc: 43.2	70-130			10/12/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV9-S9
3J09026-01RE1 (Water) Sampled: 10/05/23 8:48 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1092 **Preparation:** EPA 522/SPE **Prepared:** 10/12/23 08:06 **Analyst:** mld

1,4-Dioxane	350	2.8	7.0	ug/l	100	10/17/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	88%	Conc: 8.52	70-130			10/17/23	
----------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV9-S9D
3J09026-02RE1 (Water) Sampled: 10/05/23 8:48 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1092 **Preparation:** EPA 522/SPE **Prepared:** 10/12/23 08:06 **Analyst:** mld

1,4-Dioxane	320	2.8	7.0	ug/l	100	10/17/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	102%	Conc: 10.4	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV9-S10
3J09026-03 (Water) Sampled: 10/05/23 8:48 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0937		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:08		Analyst: mld	
1,4-Dioxane	0.30	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	89%	Conc: 8.87	70-130			10/17/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.37	0.27	0.50	ug/l	1	10/12/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	3.3	3.1	5.0	ug/l	1	10/12/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV9-S10
3J09026-03 (Water) Sampled: 10/05/23 8:48 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.60	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.0	0.27	0.50	ug/l	1	10/12/23	
Chloromethane	0.72	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.0		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV9-S10
3J09026-03 (Water) Sampled: 10/05/23 8:48 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	0.21	0.18	0.50	ug/l	1	10/12/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.7	70-130			10/12/23	
4-Bromofluorobenzene	89%	Conc: 44.3	70-130			10/12/23	

Sample Results

(Continued)

Sample: PT-UV9-S10D
3J09026-04 (Water) Sampled: 10/05/23 8:48 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0937		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:08		Analyst: mld	
1,4-Dioxane	0.36	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	116%	Conc: 11.3	70-130			10/17/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:12

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0937 - EPA 522											
Blank (W3J0937-BLK1)					Prepared: 10/11/23 Analyzed: 10/17/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.25			ug/l	10.0		83	70-130			
LCS (W3J0937-BS1)					Prepared: 10/11/23 Analyzed: 10/17/23						
1,4-Dioxane	1.49	0.028	0.070	ug/l	2.00		74	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.55			ug/l	10.0		76	70-130			
LCS Dup (W3J0937-BSD1)					Prepared: 10/11/23 Analyzed: 10/17/23						
1,4-Dioxane	1.63	0.028	0.070	ug/l	2.00		82	70-130	9	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.08			ug/l	10.0		81	70-130			
Batch: W3J1092 - EPA 522											
Blank (W3J1092-BLK1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.40			ug/l	10.0		74	70-130			
LCS (W3J1092-BS1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	0.0654	0.028	0.070	ug/l	0.0600		109	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.15			ug/l	10.0		91	70-130			
LCS Dup (W3J1092-BSD1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	0.0694	0.028	0.070	ug/l	0.0600		116	50-150	6	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.38			ug/l	10.0		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source	%REC	RPD	RPD	Limit	Qualifier
						Result	%REC	Limits	RPD	Limit	
Batch: W3J0917 - EPA 524.2											
Blank (W3J0917-BLK1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l						70-130	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l						70-130	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l						70-130	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l						70-130	
1,1-Dichloroethane	ND	0.27	0.50	ug/l						70-130	
1,1-Dichloroethene	ND	0.16	0.50	ug/l						70-130	
1,1-Dichloropropene	ND	0.14	0.50	ug/l						70-130	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l						70-130	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l						70-130	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l						70-130	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l						70-130	
1,2-Dichloroethane	ND	0.24	0.50	ug/l						70-130	
1,2-Dichloropropane	ND	0.13	0.50	ug/l						70-130	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l						70-130	
1,3-Dichloropropane	ND	0.27	0.50	ug/l						70-130	
1,3-Dichloropropene, Total	ND		0.50	ug/l						70-130	
2,2-Dichloropropane	ND	0.17	0.50	ug/l						70-130	
2-Butanone	ND	1.5	5.0	ug/l						70-130	
2-Chlorotoluene	ND	0.15	0.50	ug/l						70-130	
2-Hexanone	ND	1.2	5.0	ug/l						70-130	
4-Chlorotoluene	ND	0.15	0.50	ug/l						70-130	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l						70-130	
Acetone	ND	3.1	5.0	ug/l						70-130	
Acrylonitrile	ND	1.5	2.0	ug/l						70-130	
Benzene	ND	0.15	0.50	ug/l						70-130	
Bromobenzene	ND	0.15	0.50	ug/l						70-130	
Bromochloromethane	ND	0.15	0.50	ug/l						70-130	
Bromodichloromethane	ND	0.24	0.50	ug/l						70-130	
Bromoform	ND	0.38	0.50	ug/l						70-130	
Bromomethane	ND	0.27	0.50	ug/l						70-130	
Carbon Disulfide	ND	0.25	0.50	ug/l						70-130	
Carbon tetrachloride	ND	0.27	0.50	ug/l						70-130	
Chlorobenzene	ND	0.15	0.50	ug/l						70-130	
Chloroethane	ND	0.17	0.50	ug/l						70-130	
Chloroform	ND	0.27	0.50	ug/l						70-130	
Chloromethane	ND	0.23	0.50	ug/l						70-130	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l						70-130	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l						70-130	
Dibromochloromethane	ND	0.20	0.50	ug/l						70-130	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
Blank (W3J0917-BLK1)						Prepared: 10/11/23 Analyzed: 10/12/23					
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.5			ug/l	50.0		89	70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91	70-130			
LCS (W3J0917-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	4.65	0.24	0.50	ug/l	5.00		93	70-130			
1,1,1-Trichloroethane	4.43	0.26	0.50	ug/l	5.00		89	70-130			
1,1,2,2-Tetrachloroethane	4.66	0.20	0.50	ug/l	5.00		93	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)										
LCS (W3J0917-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,2-Trichloroethane	4.82	0.19	0.50	ug/l	5.00		96 70-130			
1,1-Dichloroethane	5.09	0.27	0.50	ug/l	5.00		102 70-130			
1,1-Dichloroethene	5.21	0.16	0.50	ug/l	5.00		104 70-130			
1,1-Dichloropropene	4.61	0.14	0.50	ug/l	5.00		92 70-130			
1,2,3-Trichlorobenzene	4.07	0.40	0.50	ug/l	5.00		81 70-130			
1,2,3-Trichloropropane	4.69	0.22	0.50	ug/l	5.00		94 70-130			
1,2,4-Trichlorobenzene	4.35	0.17	0.50	ug/l	5.00		87 70-130			
1,2,4-Trimethylbenzene	4.67	0.20	0.50	ug/l	5.00		93 70-130			
1,2-Dichloroethane	4.55	0.24	0.50	ug/l	5.00		91 70-130			
1,2-Dichloropropane	4.54	0.13	0.50	ug/l	5.00		91 70-130			
1,3,5-Trimethylbenzene	4.63	0.17	0.50	ug/l	5.00		93 70-130			
1,3-Dichloropropane	4.84	0.27	0.50	ug/l	5.00		97 70-130			
2,2-Dichloropropane	4.05	0.17	0.50	ug/l	5.00		81 70-130			
2-Butanone	4.18	1.5	5.0	ug/l	5.00		84 70-130			J
2-Chlorotoluene	4.58	0.15	0.50	ug/l	5.00		92 70-130			
2-Hexanone	4.56	1.2	5.0	ug/l	5.00		91 70-130			J
4-Chlorotoluene	4.46	0.15	0.50	ug/l	5.00		89 70-130			
4-Methyl-2-pentanone	4.38	1.8	5.0	ug/l	5.00		88 70-130			J
Acetone	48.9	3.1	5.0	ug/l	50.0		98 70-130			
Benzene	4.66	0.15	0.50	ug/l	5.00		93 70-130			
Bromobenzene	4.64	0.15	0.50	ug/l	5.00		93 70-130			
Bromochloromethane	4.97	0.15	0.50	ug/l	5.00		99 70-130			
Bromodichloromethane	4.43	0.24	0.50	ug/l	5.00		89 70-130			
Bromoform	4.34	0.38	0.50	ug/l	5.00		87 70-130			
Bromomethane	6.84	0.27	0.50	ug/l	5.00		137 70-130			Q-08
Carbon Disulfide	5.03	0.25	0.50	ug/l	5.00		101 70-130			
Carbon tetrachloride	4.43	0.27	0.50	ug/l	5.00		89 70-130			
Chlorobenzene	4.73	0.15	0.50	ug/l	5.00		95 70-130			
Chloroethane	6.51	0.17	0.50	ug/l	5.00		130 70-130			
Chloroform	4.96	0.27	0.50	ug/l	5.00		99 70-130			
Chloromethane	5.13	0.23	0.50	ug/l	5.00		103 70-130			
cis-1,2-Dichloroethene	4.74	0.25	0.50	ug/l	5.00		95 70-130			
cis-1,3-Dichloropropene	4.15	0.30	0.50	ug/l	5.00		83 70-130			
Dibromochloromethane	4.53	0.20	0.50	ug/l	5.00		91 70-130			
Dibromomethane	4.77	0.20	0.50	ug/l	5.00		95 70-130			
Dichlorodifluoromethane (Freon 12)	4.39	0.45	0.50	ug/l	5.00		88 70-130			
Di-isopropyl ether	20.4	1.1	2.0	ug/l	20.0		102 70-130			
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100 70-130			
Ethylbenzene	4.27	0.21	0.50	ug/l	5.00		85 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS (W3J0917-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
Freon 113	4.95	1.5	5.0	ug/l	5.00		99	70-130			J
Hexachlorobutadiene	4.29	0.40	0.50	ug/l	5.00		86	70-130			
Isopropylbenzene	4.47	0.18	0.50	ug/l	5.00		89	70-130			
m,p-Xylene	4.51	0.33	0.50	ug/l	5.00		90	70-130			
m-Dichlorobenzene	4.59	0.14	0.50	ug/l	5.00		92	70-130			
Methyl tert-butyl ether (MTBE)	18.6	0.94	2.0	ug/l	20.0		93	70-130			
Methylene chloride	4.91	0.30	0.50	ug/l	5.00		98	70-130			
Naphthalene	4.40	0.35	0.50	ug/l	5.00		88	70-130			
n-Butylbenzene	4.35	0.29	0.50	ug/l	5.00		87	70-130			
n-Propylbenzene	4.65	0.18	0.50	ug/l	5.00		93	70-130			
o-Dichlorobenzene	5.06	0.19	0.50	ug/l	5.00		101	70-130			
o-Xylene	4.75	0.20	0.50	ug/l	5.00		95	70-130			
p-Dichlorobenzene	4.98	0.18	0.50	ug/l	5.00		100	70-130			
p-Isopropyltoluene	4.60	0.25	0.50	ug/l	5.00		92	70-130			
sec-Butylbenzene	4.59	0.24	0.50	ug/l	5.00		92	70-130			
Styrene	4.73	0.19	0.50	ug/l	5.00		95	70-130			
Tert-amyl methyl ether	18.5	0.59	2.0	ug/l	20.0		92	70-130			
tert-Butylbenzene	4.55	0.18	0.50	ug/l	5.00		91	70-130			
Tetrachloroethene	4.18	0.18	0.50	ug/l	5.00		84	70-130			
Toluene	4.78	0.29	0.50	ug/l	5.00		96	70-130			
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100	70-130			
trans-1,3-Dichloropropene	4.57	0.32	0.50	ug/l	5.00		91	70-130			
Trichloroethene	4.21	0.18	0.50	ug/l	5.00		84	70-130			
Trichlorofluoromethane	5.91	0.18	0.50	ug/l	5.00		118	70-130			
Vinyl chloride	4.97	0.18	0.50	ug/l	5.00		99	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	51.5			ug/l	50.0		103	70-130			
LCS Dup (W3J0917-BSD1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.81	0.24	0.50	ug/l	5.00		116	70-130	22	30	
1,1,1-Trichloroethane	4.82	0.26	0.50	ug/l	5.00		96	70-130	9	30	
1,1,2,2-Tetrachloroethane	5.43	0.20	0.50	ug/l	5.00		109	70-130	15	30	
1,1,2-Trichloroethane	5.71	0.19	0.50	ug/l	5.00		114	70-130	17	30	
1,1-Dichloroethane	4.80	0.27	0.50	ug/l	5.00		96	70-130	6	30	
1,1-Dichloroethene	5.29	0.16	0.50	ug/l	5.00		106	70-130	1	30	
1,1-Dichloropropene	5.89	0.14	0.50	ug/l	5.00		118	70-130	24	30	
1,2,3-Trichlorobenzene	4.82	0.40	0.50	ug/l	5.00		96	70-130	17	30	
1,2,3-Trichloropropane	5.45	0.22	0.50	ug/l	5.00		109	70-130	15	30	
1,2,4-Trichlorobenzene	5.22	0.17	0.50	ug/l	5.00		104	70-130	18	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)											
						Prepared: 10/11/23 Analyzed: 10/12/23					
1,2,4-Trimethylbenzene	5.38	0.20	0.50	ug/l	5.00		108	70-130	14	30	
1,2-Dichloroethane	5.84	0.24	0.50	ug/l	5.00		117	70-130	25	30	
1,2-Dichloropropane	5.59	0.13	0.50	ug/l	5.00		112	70-130	21	30	
1,3,5-Trimethylbenzene	5.31	0.17	0.50	ug/l	5.00		106	70-130	14	30	
1,3-Dichloropropane	5.67	0.27	0.50	ug/l	5.00		113	70-130	16	30	
2,2-Dichloropropane	4.83	0.17	0.50	ug/l	5.00		97	70-130	18	30	
2-Butanone	4.92	1.5	5.0	ug/l	5.00		98	70-130	16	30	J
2-Chlorotoluene	5.14	0.15	0.50	ug/l	5.00		103	70-130	11	30	
2-Hexanone	5.27	1.2	5.0	ug/l	5.00		105	70-130	14	30	
4-Chlorotoluene	5.01	0.15	0.50	ug/l	5.00		100	70-130	12	30	
4-Methyl-2-pentanone	5.68	1.8	5.0	ug/l	5.00		114	70-130	26	30	
Acetone	51.5	3.1	5.0	ug/l	50.0		103	70-130	5	30	
Benzene	5.58	0.15	0.50	ug/l	5.00		112	70-130	18	30	
Bromobenzene	5.38	0.15	0.50	ug/l	5.00		108	70-130	15	30	
Bromochloromethane	4.16	0.15	0.50	ug/l	5.00		83	70-130	18	30	
Bromodichloromethane	5.77	0.24	0.50	ug/l	5.00		115	70-130	26	30	
Bromoform	5.26	0.38	0.50	ug/l	5.00		105	70-130	19	30	
Bromomethane	4.28	0.27	0.50	ug/l	5.00		86	70-130	46	30	A-01
Carbon Disulfide	4.80	0.25	0.50	ug/l	5.00		96	70-130	5	30	
Carbon tetrachloride	5.86	0.27	0.50	ug/l	5.00		117	70-130	28	30	
Chlorobenzene	5.54	0.15	0.50	ug/l	5.00		111	70-130	16	30	
Chloroethane	4.18	0.17	0.50	ug/l	5.00		84	70-130	44	30	Q-12
Chloroform	4.42	0.27	0.50	ug/l	5.00		88	70-130	12	30	
Chloromethane	4.20	0.23	0.50	ug/l	5.00		84	70-130	20	30	
cis-1,2-Dichloroethene	4.71	0.25	0.50	ug/l	5.00		94	70-130	0.5	30	
cis-1,3-Dichloropropene	5.46	0.30	0.50	ug/l	5.00		109	70-130	27	30	
Dibromochloromethane	5.34	0.20	0.50	ug/l	5.00		107	70-130	17	30	
Dibromomethane	5.44	0.20	0.50	ug/l	5.00		109	70-130	13	30	
Dichlorodifluoromethane (Freon 12)	5.04	0.45	0.50	ug/l	5.00		101	70-130	14	30	
Di-isopropyl ether	21.8	1.1	2.0	ug/l	20.0		109	70-130	6	30	
Ethyl tert-butyl ether	21.3	1.0	2.0	ug/l	20.0		107	70-130	7	30	
Ethylbenzene	5.23	0.21	0.50	ug/l	5.00		105	70-130	20	30	
Freon 113	5.51	1.5	5.0	ug/l	5.00		110	70-130	11	30	
Hexachlorobutadiene	5.03	0.40	0.50	ug/l	5.00		101	70-130	16	30	
Isopropylbenzene	5.26	0.18	0.50	ug/l	5.00		105	70-130	16	30	
m,p-Xylene	5.17	0.33	0.50	ug/l	5.00		103	70-130	14	30	
m-Dichlorobenzene	5.11	0.14	0.50	ug/l	5.00		102	70-130	11	30	
Methyl tert-butyl ether (MTBE)	20.8	0.94	2.0	ug/l	20.0		104	70-130	11	30	
Methylene chloride	4.68	0.30	0.50	ug/l	5.00		94	70-130	5	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)											
					Prepared: 10/11/23 Analyzed: 10/12/23						
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99	70-130	12	30	
n-Butylbenzene	5.14	0.29	0.50	ug/l	5.00		103	70-130	17	30	
n-Propylbenzene	5.28	0.18	0.50	ug/l	5.00		106	70-130	13	30	
o-Dichlorobenzene	5.48	0.19	0.50	ug/l	5.00		110	70-130	8	30	
o-Xylene	5.38	0.20	0.50	ug/l	5.00		108	70-130	12	30	
p-Dichlorobenzene	5.53	0.18	0.50	ug/l	5.00		111	70-130	10	30	
p-Isopropyltoluene	5.27	0.25	0.50	ug/l	5.00		105	70-130	14	30	
sec-Butylbenzene	5.24	0.24	0.50	ug/l	5.00		105	70-130	13	30	
Styrene	5.32	0.19	0.50	ug/l	5.00		106	70-130	12	30	
Tert-amyl methyl ether	24.1	0.59	2.0	ug/l	20.0		120	70-130	26	30	
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101	70-130	11	30	
Tetrachloroethene	5.27	0.18	0.50	ug/l	5.00		105	70-130	23	30	
Toluene	5.88	0.29	0.50	ug/l	5.00		118	70-130	21	30	
trans-1,2-Dichloroethene	4.85	0.26	0.50	ug/l	5.00		97	70-130	2	30	
trans-1,3-Dichloropropene	5.62	0.32	0.50	ug/l	5.00		112	70-130	21	30	
Trichloroethene	5.31	0.18	0.50	ug/l	5.00		106	70-130	23	30	
Trichlorofluoromethane	5.26	0.18	0.50	ug/l	5.00		105	70-130	12	30	
Vinyl chloride	4.46	0.18	0.50	ug/l	5.00		89	70-130	11	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.5			ug/l	50.0		105	70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/19/2023 18:12

Notes and Definitions

Item	Definition
A-01	The RPD result exceeded the QC control limits. The batch was accepted based on acceptable LCSD & CCVs.
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **309026**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED						SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		EPA 522 1,4-dioxane EPA 524.2 VOCs						<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input checked="" type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindle		INVOICE TO: Rose Ford, Rford@BrwnCald.com								SAMPLER	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPLER TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs										
	10/5	8:48	6	PT-UV9-S9	5	X	X										
		8:48	1	PT-UV9-S9D	2	X											
		8:48		PT-UV9-S10	5	X	X										
		8:48	Y	PT-UV9-S10D	2	X											
		8:48		PT-UV10-S9	5	X	X										
				PT-UV10-S9D	2	X											
				PT-UV10-S10	5	X	X										
				PT-UV10-S10D	2	X											
				PT-UV11-S9	5	X	X										
				PT-UV11-S10	2	X											
				PT-UV11-S10D	5	X	X										
				PT-UV11-S10D	2	X											

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 2:22	RECEIVED BY <i>[Signature]</i>	SAMPLE CONDITION: Actual Temperature: 4.9 F-0781	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 4:10	RECEIVED BY <i>[Signature]</i>	Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	Y/N Y/N Y/N Y/N Y/N
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **3109026**

Date/Time Received: **10/5/2023**

WKO Logged by: **Jerald Ancheta**

of Samples: **4**

Samples Checked by: **Jerico Botolano**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		4.9°C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		Wet		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cl Test Strip Lot#
ORG pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amn. added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerald Ancheta

Date: **10/9/2023**

Work Orders: 3J09028

Report Date: 10/19/2023

Project: COSM 97-005

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

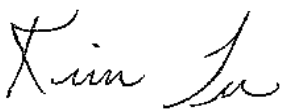
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Certificate of Analysis

FINAL REPORT

Project Number: COSM 97-005

Reported:

10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV7-S9	Client	3J09028-01	Water	10/04/23 08:50	
PT-UV7-S9D	Client	3J09028-02	Water	10/05/23 08:50	
PT-UV19-S9	Client	3J09028-03	Water	10/04/23 13:43	
PT-UV19-S9D	Client	3J09028-04	Water	10/04/23 13:43	
FIELD BLANK	Client	3J09028-05	Water	10/04/23 17:00	
TRIP BLANK	Client	3J09028-06	Water	10/04/23 17:00	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV7-S9
3J09028-01 (Water) Sampled: 10/04/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.57	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	3.2	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	3.7	3.1	5.0	ug/l	1	10/12/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.73	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.9	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV7-S9
3J09028-01 (Water) Sampled: 10/04/23 8:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	1.1	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	14	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.9		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	37	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV7-S9
3J09028-01 (Water) Sampled: 10/04/23 8:50 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J0917 **Preparation:** EPA 5030B **Prepared:** 10/11/23 12:05 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	84%	Conc: 42.2	70-130			10/12/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	91%	Conc: 45.6	70-130			10/12/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV7-S9
3J09028-01RE1 (Water) Sampled: 10/04/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0937 **Preparation:** EPA 522/SPE **Prepared:** 10/11/23 08:08 **Analyst:** mld

1,4-Dioxane	24	1.4	3.5	ug/l	50	10/17/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	85%	Conc: 8.20	70-130			10/17/23	
----------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV7-S9D
3J09028-02RE1 (Water) Sampled: 10/05/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0937 **Preparation:** EPA 522/SPE **Prepared:** 10/11/23 08:08 **Analyst:** mld

1,4-Dioxane	28	1.4	3.5	ug/l	50	10/17/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	80%	Conc: 7.57	70-130			10/17/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV19-S9
3J09028-03 (Water) Sampled: 10/04/23 13:43 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.56	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	3.0	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.53	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.6	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV19-S9
3J09028-03 (Water) Sampled: 10/04/23 13:43 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	0.35	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	1.0	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	14	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.6		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	34	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	0.18	0.18	0.50	ug/l	1	10/12/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV19-S9
3J09028-03 (Water) Sampled: 10/04/23 13:43 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	90%	Conc: 44.9	70-130			10/12/23	
4-Bromofluorobenzene	91%	Conc: 45.5	70-130			10/12/23	

Sample Results

(Continued)

Sample: PT-UV19-S9
3J09028-03RE1 (Water) Sampled: 10/04/23 13:43 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 522 Instr: GCMS20							
Batch ID: W3J0937		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:08		Analyst: mld	
1,4-Dioxane	330	2.8	7.0	ug/l	100	10/17/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	88%	Conc: 8.59	70-130			10/17/23	

Sample Results

(Continued)

Sample: PT-UV19-S9D
3J09028-04RE1 (Water) Sampled: 10/04/23 13:43 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 522 Instr: GCMS20							
Batch ID: W3J0937		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:08		Analyst: mld	
1,4-Dioxane	360	2.8	7.0	ug/l	100	10/17/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	101%	Conc: 9.76	70-130			10/17/23	

Sample Results

(Continued)

Sample: FIELD BLANK
3J09028-05 (Water) Sampled: 10/04/23 17:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 522 Instr: GCMS20							
Batch ID: W3J0937		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:08		Analyst: mld	
1,4-Dioxane	0.23	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	87%	Conc: 9.03	70-130			10/17/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: TRIP BLANK
3J09028-06 (Water) Sampled: 10/04/23 17:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	520	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: TRIP BLANK
3J09028-06 (Water) Sampled: 10/04/23 17:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 10/19/2023 18:04

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: TRIP BLANK
 3J09028-06 (Water) Sampled: 10/04/23 17:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 43.9	70-130			10/12/23	
4-Bromofluorobenzene	91%	Conc: 45.5	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0937 - EPA 522											
Blank (W3J0937-BLK1)											
Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.25			ug/l	10.0		83	70-130			
LCS (W3J0937-BS1)											
Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	1.49	0.028	0.070	ug/l	2.00		74	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.55			ug/l	10.0		76	70-130			
LCS Dup (W3J0937-BSD1)											
Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	1.63	0.028	0.070	ug/l	2.00		82	70-130	9	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.08			ug/l	10.0		81	70-130			

Quality Control Results

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2											
Blank (W3J0917-BLK1)											
Prepared: 10/11/23 Analyzed: 10/12/23											
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
Blank (W3J0917-BLK1)						Prepared: 10/11/23 Analyzed: 10/12/23					
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
Blank (W3J0917-BLK1)						Prepared: 10/11/23 Analyzed: 10/12/23					
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.5			ug/l	50.0		89	70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91	70-130			
LCS (W3J0917-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	4.65	0.24	0.50	ug/l	5.00		93	70-130			
1,1,1-Trichloroethane	4.43	0.26	0.50	ug/l	5.00		89	70-130			
1,1,2,2-Tetrachloroethane	4.66	0.20	0.50	ug/l	5.00		93	70-130			
1,1,2-Trichloroethane	4.82	0.19	0.50	ug/l	5.00		96	70-130			
1,1-Dichloroethane	5.09	0.27	0.50	ug/l	5.00		102	70-130			
1,1-Dichloroethene	5.21	0.16	0.50	ug/l	5.00		104	70-130			
1,1-Dichloropropene	4.61	0.14	0.50	ug/l	5.00		92	70-130			
1,2,3-Trichlorobenzene	4.07	0.40	0.50	ug/l	5.00		81	70-130			
1,2,3-Trichloropropane	4.69	0.22	0.50	ug/l	5.00		94	70-130			
1,2,4-Trichlorobenzene	4.35	0.17	0.50	ug/l	5.00		87	70-130			
1,2,4-Trimethylbenzene	4.67	0.20	0.50	ug/l	5.00		93	70-130			
1,2-Dichloroethane	4.55	0.24	0.50	ug/l	5.00		91	70-130			
1,2-Dichloropropane	4.54	0.13	0.50	ug/l	5.00		91	70-130			
1,3,5-Trimethylbenzene	4.63	0.17	0.50	ug/l	5.00		93	70-130			
1,3-Dichloropropane	4.84	0.27	0.50	ug/l	5.00		97	70-130			
2,2-Dichloropropane	4.05	0.17	0.50	ug/l	5.00		81	70-130			
2-Butanone	4.18	1.5	5.0	ug/l	5.00		84	70-130			J
2-Chlorotoluene	4.58	0.15	0.50	ug/l	5.00		92	70-130			
2-Hexanone	4.56	1.2	5.0	ug/l	5.00		91	70-130			J
4-Chlorotoluene	4.46	0.15	0.50	ug/l	5.00		89	70-130			
4-Methyl-2-pentanone	4.38	1.8	5.0	ug/l	5.00		88	70-130			J
Acetone	48.9	3.1	5.0	ug/l	50.0		98	70-130			
Benzene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.64	0.15	0.50	ug/l	5.00		93	70-130			
Bromochloromethane	4.97	0.15	0.50	ug/l	5.00		99	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)										
LCS (W3J0917-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23					
Bromodichloromethane	4.43	0.24	0.50	ug/l	5.00		89 70-130			
Bromoform	4.34	0.38	0.50	ug/l	5.00		87 70-130			
Bromomethane	6.84	0.27	0.50	ug/l	5.00		137 70-130			Q-08
Carbon Disulfide	5.03	0.25	0.50	ug/l	5.00		101 70-130			
Carbon tetrachloride	4.43	0.27	0.50	ug/l	5.00		89 70-130			
Chlorobenzene	4.73	0.15	0.50	ug/l	5.00		95 70-130			
Chloroethane	6.51	0.17	0.50	ug/l	5.00		130 70-130			
Chloroform	4.96	0.27	0.50	ug/l	5.00		99 70-130			
Chloromethane	5.13	0.23	0.50	ug/l	5.00		103 70-130			
cis-1,2-Dichloroethene	4.74	0.25	0.50	ug/l	5.00		95 70-130			
cis-1,3-Dichloropropene	4.15	0.30	0.50	ug/l	5.00		83 70-130			
Dibromochloromethane	4.53	0.20	0.50	ug/l	5.00		91 70-130			
Dibromomethane	4.77	0.20	0.50	ug/l	5.00		95 70-130			
Dichlorodifluoromethane (Freon 12)	4.39	0.45	0.50	ug/l	5.00		88 70-130			
Di-isopropyl ether	20.4	1.1	2.0	ug/l	20.0		102 70-130			
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100 70-130			
Ethylbenzene	4.27	0.21	0.50	ug/l	5.00		85 70-130			
Freon 113	4.95	1.5	5.0	ug/l	5.00		99 70-130			J
Hexachlorobutadiene	4.29	0.40	0.50	ug/l	5.00		86 70-130			
Isopropylbenzene	4.47	0.18	0.50	ug/l	5.00		89 70-130			
m,p-Xylene	4.51	0.33	0.50	ug/l	5.00		90 70-130			
m-Dichlorobenzene	4.59	0.14	0.50	ug/l	5.00		92 70-130			
Methyl tert-butyl ether (MTBE)	18.6	0.94	2.0	ug/l	20.0		93 70-130			
Methylene chloride	4.91	0.30	0.50	ug/l	5.00		98 70-130			
Naphthalene	4.40	0.35	0.50	ug/l	5.00		88 70-130			
n-Butylbenzene	4.35	0.29	0.50	ug/l	5.00		87 70-130			
n-Propylbenzene	4.65	0.18	0.50	ug/l	5.00		93 70-130			
o-Dichlorobenzene	5.06	0.19	0.50	ug/l	5.00		101 70-130			
o-Xylene	4.75	0.20	0.50	ug/l	5.00		95 70-130			
p-Dichlorobenzene	4.98	0.18	0.50	ug/l	5.00		100 70-130			
p-Isopropyltoluene	4.60	0.25	0.50	ug/l	5.00		92 70-130			
sec-Butylbenzene	4.59	0.24	0.50	ug/l	5.00		92 70-130			
Styrene	4.73	0.19	0.50	ug/l	5.00		95 70-130			
Tert-amyl methyl ether	18.5	0.59	2.0	ug/l	20.0		92 70-130			
tert-Butylbenzene	4.55	0.18	0.50	ug/l	5.00		91 70-130			
Tetrachloroethene	4.18	0.18	0.50	ug/l	5.00		84 70-130			
Toluene	4.78	0.29	0.50	ug/l	5.00		96 70-130			
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100 70-130			
trans-1,3-Dichloropropene	4.57	0.32	0.50	ug/l	5.00		91 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS (W3J0917-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
Trichloroethene	4.21	0.18	0.50	ug/l	5.00		84	70-130			
Trichlorofluoromethane	5.91	0.18	0.50	ug/l	5.00		118	70-130			
Vinyl chloride	4.97	0.18	0.50	ug/l	5.00		99	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	51.5			ug/l	50.0		103	70-130			
LCS Dup (W3J0917-BSD1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.81	0.24	0.50	ug/l	5.00		116	70-130	22	30	
1,1,1-Trichloroethane	4.82	0.26	0.50	ug/l	5.00		96	70-130	9	30	
1,1,2,2-Tetrachloroethane	5.43	0.20	0.50	ug/l	5.00		109	70-130	15	30	
1,1,2-Trichloroethane	5.71	0.19	0.50	ug/l	5.00		114	70-130	17	30	
1,1-Dichloroethane	4.80	0.27	0.50	ug/l	5.00		96	70-130	6	30	
1,1-Dichloroethene	5.29	0.16	0.50	ug/l	5.00		106	70-130	1	30	
1,1-Dichloropropene	5.89	0.14	0.50	ug/l	5.00		118	70-130	24	30	
1,2,3-Trichlorobenzene	4.82	0.40	0.50	ug/l	5.00		96	70-130	17	30	
1,2,3-Trichloropropane	5.45	0.22	0.50	ug/l	5.00		109	70-130	15	30	
1,2,4-Trichlorobenzene	5.22	0.17	0.50	ug/l	5.00		104	70-130	18	30	
1,2,4-Trimethylbenzene	5.38	0.20	0.50	ug/l	5.00		108	70-130	14	30	
1,2-Dichloroethane	5.84	0.24	0.50	ug/l	5.00		117	70-130	25	30	
1,2-Dichloropropane	5.59	0.13	0.50	ug/l	5.00		112	70-130	21	30	
1,3,5-Trimethylbenzene	5.31	0.17	0.50	ug/l	5.00		106	70-130	14	30	
1,3-Dichloropropane	5.67	0.27	0.50	ug/l	5.00		113	70-130	16	30	
2,2-Dichloropropane	4.83	0.17	0.50	ug/l	5.00		97	70-130	18	30	
2-Butanone	4.92	1.5	5.0	ug/l	5.00		98	70-130	16	30	J
2-Chlorotoluene	5.14	0.15	0.50	ug/l	5.00		103	70-130	11	30	
2-Hexanone	5.27	1.2	5.0	ug/l	5.00		105	70-130	14	30	
4-Chlorotoluene	5.01	0.15	0.50	ug/l	5.00		100	70-130	12	30	
4-Methyl-2-pentanone	5.68	1.8	5.0	ug/l	5.00		114	70-130	26	30	
Acetone	51.5	3.1	5.0	ug/l	50.0		103	70-130	5	30	
Benzene	5.58	0.15	0.50	ug/l	5.00		112	70-130	18	30	
Bromobenzene	5.38	0.15	0.50	ug/l	5.00		108	70-130	15	30	
Bromochloromethane	4.16	0.15	0.50	ug/l	5.00		83	70-130	18	30	
Bromodichloromethane	5.77	0.24	0.50	ug/l	5.00		115	70-130	26	30	
Bromoform	5.26	0.38	0.50	ug/l	5.00		105	70-130	19	30	
Bromomethane	4.28	0.27	0.50	ug/l	5.00		86	70-130	46	30	A-01
Carbon Disulfide	4.80	0.25	0.50	ug/l	5.00		96	70-130	5	30	
Carbon tetrachloride	5.86	0.27	0.50	ug/l	5.00		117	70-130	28	30	
Chlorobenzene	5.54	0.15	0.50	ug/l	5.00		111	70-130	16	30	
Chloroethane	4.18	0.17	0.50	ug/l	5.00		84	70-130	44	30	Q-12

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:04

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)											
					Prepared: 10/11/23 Analyzed: 10/12/23						
Chloroform	4.42	0.27	0.50	ug/l	5.00		88	70-130	12	30	
Chloromethane	4.20	0.23	0.50	ug/l	5.00		84	70-130	20	30	
cis-1,2-Dichloroethene	4.71	0.25	0.50	ug/l	5.00		94	70-130	0.5	30	
cis-1,3-Dichloropropene	5.46	0.30	0.50	ug/l	5.00		109	70-130	27	30	
Dibromochloromethane	5.34	0.20	0.50	ug/l	5.00		107	70-130	17	30	
Dibromomethane	5.44	0.20	0.50	ug/l	5.00		109	70-130	13	30	
Dichlorodifluoromethane (Freon 12)	5.04	0.45	0.50	ug/l	5.00		101	70-130	14	30	
Di-isopropyl ether	21.8	1.1	2.0	ug/l	20.0		109	70-130	6	30	
Ethyl tert-butyl ether	21.3	1.0	2.0	ug/l	20.0		107	70-130	7	30	
Ethylbenzene	5.23	0.21	0.50	ug/l	5.00		105	70-130	20	30	
Freon 113	5.51	1.5	5.0	ug/l	5.00		110	70-130	11	30	
Hexachlorobutadiene	5.03	0.40	0.50	ug/l	5.00		101	70-130	16	30	
Isopropylbenzene	5.26	0.18	0.50	ug/l	5.00		105	70-130	16	30	
m,p-Xylene	5.17	0.33	0.50	ug/l	5.00		103	70-130	14	30	
m-Dichlorobenzene	5.11	0.14	0.50	ug/l	5.00		102	70-130	11	30	
Methyl tert-butyl ether (MTBE)	20.8	0.94	2.0	ug/l	20.0		104	70-130	11	30	
Methylene chloride	4.68	0.30	0.50	ug/l	5.00		94	70-130	5	30	
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99	70-130	12	30	
n-Butylbenzene	5.14	0.29	0.50	ug/l	5.00		103	70-130	17	30	
n-Propylbenzene	5.28	0.18	0.50	ug/l	5.00		106	70-130	13	30	
o-Dichlorobenzene	5.48	0.19	0.50	ug/l	5.00		110	70-130	8	30	
o-Xylene	5.38	0.20	0.50	ug/l	5.00		108	70-130	12	30	
p-Dichlorobenzene	5.53	0.18	0.50	ug/l	5.00		111	70-130	10	30	
p-Isopropyltoluene	5.27	0.25	0.50	ug/l	5.00		105	70-130	14	30	
sec-Butylbenzene	5.24	0.24	0.50	ug/l	5.00		105	70-130	13	30	
Styrene	5.32	0.19	0.50	ug/l	5.00		106	70-130	12	30	
Tert-amyl methyl ether	24.1	0.59	2.0	ug/l	20.0		120	70-130	26	30	
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101	70-130	11	30	
Tetrachloroethene	5.27	0.18	0.50	ug/l	5.00		105	70-130	23	30	
Toluene	5.88	0.29	0.50	ug/l	5.00		118	70-130	21	30	
trans-1,2-Dichloroethene	4.85	0.26	0.50	ug/l	5.00		97	70-130	2	30	
trans-1,3-Dichloropropene	5.62	0.32	0.50	ug/l	5.00		112	70-130	21	30	
Trichloroethene	5.31	0.18	0.50	ug/l	5.00		106	70-130	23	30	
Trichlorofluoromethane	5.26	0.18	0.50	ug/l	5.00		105	70-130	12	30	
Vinyl chloride	4.46	0.18	0.50	ug/l	5.00		89	70-130	11	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.5			ug/l	50.0		105	70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:04

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
A-01	The RPD result exceeded the QC control limits. The batch was accepted based on acceptable LCSD & CCVs.
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **2109028**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING									
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		<table border="1"> <tr> <td>EPA 522 1,4-dioxane</td> <td>EPA 524.2 VOCs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				EPA 522 1,4-dioxane	EPA 524.2 VOCs							<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input checked="" type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
EPA 522 1,4-dioxane	EPA 524.2 VOCs																
PROJECT MANAGER Chris Kindle		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com		Charges will apply for weekends/holidays		Method of Shipment:											

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	COMMENTS	
	10/4/23	8:50	G	PT-UV7-S9	5	X	X		
		8:50	G	PT-UV7-S9D	2	X			
		13:43	G	PT-UV19-S9	5	X	X		
		13:43	G	PT-UV19-S9D	2	X			
		17:00	G	Field Blank	2	X			
		17:00	G	Trip Blank	1		X		

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23	RECEIVED BY <i>[Signature]</i>	SAMPLE CONDITION: Actual Temperature: 4.9 <i>T-0281</i> Relieved On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 4:10	RECEIVED BY <i>[Signature]</i>		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **3109028**

Date/Time Received: **10/5/2023**

WKO Logged by: **Jerald Ancheta**

of Samples: **6**

Samples Checked by: **Jerico Bolotano**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		4.9°C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		Wet		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> pH paper Lot#
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Cl Test Strip Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Acid Lot#
				<input type="checkbox"/> Amt. added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jerald Ancheta*

Date: **10/9/2023**

Work Orders: 3J09031

Report Date: 11/20/2023

Project: COSM 97-005

Received Date: 10/5/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GAC15-S23	Client	3J09031-01	Water	10/04/23 16:35	
PT-GAC15-S11	Client	3J09031-02	Water	10/04/23 17:00	
PT-GAC14-S11	Client	3J09031-03	Water	10/04/23 16:25	
PT-GAC20-S11	Client	3J09031-04	Water	10/04/23 15:50	
PT-GAC14-S23	Client	3J09031-05	Water	10/04/23 16:00	
PT-GAC20-S23	Client	3J09031-06	Water	10/04/23 15:25	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9Cl-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFUnA	2058-94-8		✓
11Cl-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GAC15-S23
3J09031-01 (Water) Sampled: 10/04/23 16:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0937 **Prepared:** 10/11/23 08:08
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	103%	Conc: 9.78	70-130			10/17/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0920 **Prepared:** 10/11/23 07:43
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1300 **Prepared:** 10/16/23 10:12
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	10/18/23	
ADONA	ND	0.46	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.72	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.48	1.7	ng/l	1	10/18/23	
PFBS	ND	0.48	1.7	ng/l	1	10/18/23	
PFDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.49	1.7	ng/l	1	10/18/23	
PFNA	ND	0.43	1.7	ng/l	1	10/18/23	
PFOA	ND	0.56	1.7	ng/l	1	10/18/23	
PFOS	ND	0.44	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/18/23	
<i>Surrogate(s)</i>							
13C2-PFDA	96%	Conc: 31.9	70-130			10/18/23	
13C2-PFHxA	102%	Conc: 34.1	70-130			10/18/23	
d5-EtFOSAA	107%	Conc: 143	70-130			10/18/23	
HFPO-DA-13C3	102%	Conc: 34.1	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0917 **Prepared:** 10/11/23 12:05
Preparation: EPA 5030B **Analyst:** ADM

3J09031

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC15-S23
3J09031-01 (Water) Sampled: 10/04/23 16:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B			Prepared: 10/11/23 12:05		Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	4.2	3.1	5.0	ug/l	1	10/12/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC15-S23
3J09031-01 (Water) Sampled: 10/04/23 16:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC15-S23
 3J09031-01 (Water) Sampled: 10/04/23 16:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.6	70-130			10/12/23	
4-Bromofluorobenzene	87%	Conc: 43.6	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC15-S11
3J09031-02 (Water) Sampled: 10/04/23 17:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0937 **Prepared:** 10/11/23 08:08
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	98%	Conc: 9.53	70-130			10/17/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0920 **Prepared:** 10/11/23 07:43
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1300 **Prepared:** 10/16/23 10:12
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.46	1.6	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.43	1.6	ng/l	1	10/18/23	
ADONA	ND	0.45	1.6	ng/l	1	10/18/23	
EtFOSAA	ND	0.39	1.6	ng/l	1	10/18/23	
HFPO-DA	ND	0.72	1.6	ng/l	1	10/18/23	
MeFOSAA	ND	0.47	1.6	ng/l	1	10/18/23	
PFBS	ND	0.47	1.6	ng/l	1	10/18/23	
PFDA	ND	0.37	1.6	ng/l	1	10/18/23	
PFDaA	ND	0.54	1.6	ng/l	1	10/18/23	
PFHpA	ND	0.44	1.6	ng/l	1	10/18/23	
PFHxA	ND	0.40	1.6	ng/l	1	10/18/23	
PFHxS	ND	0.49	1.6	ng/l	1	10/18/23	
PFNA	ND	0.43	1.6	ng/l	1	10/18/23	
PFOA	ND	0.55	1.6	ng/l	1	10/18/23	
PFOS	ND	0.44	1.6	ng/l	1	10/18/23	
PFTeDA	ND	0.37	1.6	ng/l	1	10/18/23	
PFTrDA	ND	0.34	1.6	ng/l	1	10/18/23	
PFUnA	ND	0.39	1.6	ng/l	1	10/18/23	
<i>Surrogate(s)</i>							
13C2-PFDA	95%	Conc: 31.2	70-130			10/18/23	
13C2-PFHxA	96%	Conc: 31.7	70-130			10/18/23	
d5-EtFOSAA	105%	Conc: 138	70-130			10/18/23	
HFPO-DA-13C3	97%	Conc: 31.8	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0917 **Prepared:** 10/11/23 12:05
Preparation: EPA 5030B **Analyst:** ADM

3J09031

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC15-S11
3J09031-02 (Water) Sampled: 10/04/23 17:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC15-S11
3J09031-02 (Water) Sampled: 10/04/23 17:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	0.39	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC15-S11
 3J09031-02 (Water) Sampled: 10/04/23 17:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	86%	Conc: 43.0	70-130			10/12/23	
4-Bromofluorobenzene	91%	Conc: 45.3	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC14-S11
3J09031-03 (Water) Sampled: 10/04/23 16:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0937

Preparation: EPA 522/SPE

Prepared: 10/11/23 08:08

Analyst: mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	105%	Conc: 11.0	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W3J0920

Preparation: EPA 5030B

Prepared: 10/11/23 07:43

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1300

Preparation: EPA 537/SPE

Prepared: 10/16/23 10:12

Analyst: jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/18/23	
ADONA	ND	0.46	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.73	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.48	1.7	ng/l	1	10/18/23	
PFBS	ND	0.49	1.7	ng/l	1	10/18/23	
PFDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/18/23	
PFNA	ND	0.44	1.7	ng/l	1	10/18/23	
PFOA	ND	0.56	1.7	ng/l	1	10/18/23	
PFOS	ND	0.45	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	98%	Conc: 33.0	70-130			10/18/23	
13C2-PFHxA	97%	Conc: 32.7	70-130			10/18/23	
d5-EtFOSAA	113%	Conc: 153	70-130			10/18/23	
HFPO-DA-13C3	99%	Conc: 33.5	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

3J09031

Page 11 of 37

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC14-S11
3J09031-03 (Water) Sampled: 10/04/23 16:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC14-S11
3J09031-03 (Water) Sampled: 10/04/23 16:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	0.36	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC14-S11
 3J09031-03 (Water) Sampled: 10/04/23 16:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.1	70-130			10/12/23	
4-Bromofluorobenzene	87%	Conc: 43.5	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC20-S11
3J09031-04 (Water) Sampled: 10/04/23 15:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0937 **Prepared:** 10/11/23 08:08
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	110%	Conc: 11.0	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0920 **Prepared:** 10/11/23 07:43
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1300 **Prepared:** 10/16/23 10:12
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/18/23	
ADONA	ND	0.48	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.76	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/18/23	
PFBS	ND	0.50	1.7	ng/l	1	10/18/23	
PFDA	ND	0.39	1.7	ng/l	1	10/18/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.52	1.7	ng/l	1	10/18/23	
PFNA	ND	0.45	1.7	ng/l	1	10/18/23	
PFOA	ND	0.58	1.7	ng/l	1	10/18/23	
PFOS	ND	0.46	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	100%	Conc: 34.9	70-130			10/18/23	
13C2-PFHxA	103%	Conc: 35.7	70-130			10/18/23	
d5-EtFOSAA	114%	Conc: 159	70-130			10/18/23	
HFPO-DA-13C3	104%	Conc: 36.1	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0917 **Prepared:** 10/11/23 12:05
Preparation: EPA 5030B **Analyst:** ADM

3J09031

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC20-S11
3J09031-04 (Water) Sampled: 10/04/23 15:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	6.1	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC20-S11
3J09031-04 (Water) Sampled: 10/04/23 15:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC20-S11
 3J09031-04 (Water) Sampled: 10/04/23 15:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.7	70-130			10/12/23	
4-Bromofluorobenzene	87%	Conc: 43.5	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC14-S23
3J09031-05 (Water) Sampled: 10/04/23 16:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0937

Preparation: EPA 522/SPE

Prepared: 10/11/23 08:08

Analyst: mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	100%	Conc: 10.7	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W3J0920

Preparation: EPA 5030B

Prepared: 10/11/23 07:43

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1300

Preparation: EPA 537/SPE

Prepared: 10/16/23 10:12

Analyst: jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/18/23	
ADONA	ND	0.46	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.73	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.48	1.7	ng/l	1	10/18/23	
PFBS	ND	0.49	1.7	ng/l	1	10/18/23	
PFDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/18/23	
PFNA	ND	0.44	1.7	ng/l	1	10/18/23	
PFOA	ND	0.56	1.7	ng/l	1	10/18/23	
PFOS	ND	0.45	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/18/23	
PFTrDA	ND	0.35	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/18/23	

Surrogate(s)

13C2-PFDA	99%	Conc: 33.3	70-130			10/18/23	
13C2-PFHxA	101%	Conc: 34.1	70-130			10/18/23	
d5-EtFOSAA	113%	Conc: 152	70-130			10/18/23	
HFPO-DA-13C3	104%	Conc: 34.9	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

3J09031

Page 19 of 37

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC14-S23
3J09031-05 (Water) Sampled: 10/04/23 16:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC14-S23
3J09031-05 (Water) Sampled: 10/04/23 16:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	0.68	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC14-S23
 3J09031-05 (Water) Sampled: 10/04/23 16:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	81%	Conc: 40.6	70-130			10/12/23	
4-Bromofluorobenzene	86%	Conc: 43.0	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC20-S23
3J09031-06 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0937 **Prepared:** 10/11/23 08:08
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	0.040	0.028	0.070	ug/l	1	10/17/23	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	119%	Conc: 11.6	70-130			10/17/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0921 **Prepared:** 10/11/23 07:43
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1300 **Prepared:** 10/16/23 10:12
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/18/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/18/23	
ADONA	ND	0.48	1.7	ng/l	1	10/18/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/18/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/18/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/18/23	
PFBS	ND	0.50	1.7	ng/l	1	10/18/23	
PFDA	ND	0.39	1.7	ng/l	1	10/18/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/18/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/18/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/18/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/18/23	
PFNA	ND	0.45	1.7	ng/l	1	10/18/23	
PFOA	ND	0.58	1.7	ng/l	1	10/18/23	
PFOS	ND	0.46	1.7	ng/l	1	10/18/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/18/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/18/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/18/23	
<i>Surrogate(s)</i>							
13C2-PFDA	101%	Conc: 34.8	70-130			10/18/23	
13C2-PFHxA	100%	Conc: 34.5	70-130			10/18/23	
d5-EtFOSAA	114%	Conc: 158	70-130			10/18/23	
HFPO-DA-13C3	100%	Conc: 34.6	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J0917 **Prepared:** 10/11/23 12:05
Preparation: EPA 5030B **Analyst:** ADM

3J09031

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC20-S23
3J09031-06 (Water) Sampled: 10/04/23 15:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC20-S23
3J09031-06 (Water) Sampled: 10/04/23 15:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J0917		Preparation: EPA 5030B		Prepared: 10/11/23 12:05		Analyst: ADM	
Chloromethane	0.39	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	ND		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC20-S23
 3J09031-06 (Water) Sampled: 10/04/23 15:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J0917

Preparation: EPA 5030B

Prepared: 10/11/23 12:05

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	86%	Conc: 43.1	70-130			10/12/23	
4-Bromofluorobenzene	90%	Conc: 45.2	70-130			10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0937 - EPA 522											
Blank (W3J0937-BLK1) Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.25			ug/l	10.0		83	70-130			
LCS (W3J0937-BS1) Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	1.49	0.028	0.070	ug/l	2.00		74	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.55			ug/l	10.0		76	70-130			
LCS Dup (W3J0937-BSD1) Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	1.63	0.028	0.070	ug/l	2.00		82	70-130	9	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.08			ug/l	10.0		81	70-130			

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0920 - SRL 524M-TCP											
Blank (W3J0920-BLK1) Prepared: 10/11/23 Analyzed: 10/12/23											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W3J0920-BS1) Prepared: 10/11/23 Analyzed: 10/12/23											
1,2,3-Trichloropropane	0.0188	0.0012	0.0050	ug/l	0.0200		94	80-120			
LCS Dup (W3J0920-BSD1) Prepared: 10/11/23 Analyzed: 10/12/23											
1,2,3-Trichloropropane	0.0190	0.0012	0.0050	ug/l	0.0200		95	80-120	1	20	
Duplicate (W3J0920-DUP1) Source: 3J09021-01 Prepared: 10/11/23 Analyzed: 10/12/23											
1,2,3-Trichloropropane	0.0237	0.0012	0.0050	ug/l		0.0218			8	20	
Batch: W3J0921 - SRL 524M-TCP											
Blank (W3J0921-BLK1) Prepared: 10/11/23 Analyzed: 10/12/23											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W3J0921-BS1) Prepared: 10/11/23 Analyzed: 10/12/23											
1,2,3-Trichloropropane	0.0202	0.0012	0.0050	ug/l	0.0200		101	80-120			
LCS Dup (W3J0921-BSD1) Prepared: 10/11/23 Analyzed: 10/12/23											
1,2,3-Trichloropropane	0.0200	0.0012	0.0050	ug/l	0.0200		100	80-120	1	20	
Duplicate (W3J0921-DUP1) Source: 3J09031-06 Prepared: 10/11/23 Analyzed: 10/12/23											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1300 - EPA 537.1											
Blank (W3J1300-BLK1)											
Prepared: 10/16/23 Analyzed: 10/18/23											
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	39.3			ng/l	40.0		98	70-130			
13C2-PFHxA	39.5			ng/l	40.0		99	70-130			
d5-EtFOSAA	174			ng/l	160		109	70-130			
HFPO-DA-13C3	39.0			ng/l	40.0		98	70-130			
LCS (W3J1300-BS1)											
Prepared: 10/16/23 Analyzed: 10/18/23											
11CI-PF3OUdS	25.4	0.56	2.0	ng/l	20.0		127	70-130			
9CI-PF3ONS	25.3	0.53	2.0	ng/l	20.0		126	70-130			
ADONA	23.9	0.55	2.0	ng/l	20.0		119	70-130			
EtFOSAA	27.1	0.48	2.0	ng/l	20.0		136	70-130			Q-08
HFPO-DA	25.0	0.87	2.0	ng/l	20.0		125	70-130			
MeFOSAA	26.5	0.58	2.0	ng/l	20.0		133	70-130			Q-08
PFBS	25.6	0.58	2.0	ng/l	20.0		128	70-130			
PFDA	22.2	0.45	2.0	ng/l	20.0		111	70-130			
PFDoA	23.7	0.66	2.0	ng/l	20.0		118	70-130			
PFHpA	24.3	0.53	2.0	ng/l	20.0		122	70-130			
PFHxA	23.9	0.49	2.0	ng/l	20.0		120	70-130			
PFHxS	25.0	0.59	2.0	ng/l	20.0		125	70-130			
PFNA	24.3	0.52	2.0	ng/l	20.0		122	70-130			
PFOA	25.3	0.67	2.0	ng/l	20.0		126	70-130			
PFOS	24.2	0.53	2.0	ng/l	20.0		121	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J1300 - EPA 537.1 (Continued)											
LCS (W3J1300-BS1)						Prepared: 10/16/23 Analyzed: 10/18/23					
PFTeDA	25.2	0.45	2.0	ng/l	20.0		126	70-130			
PFTTrDA	20.4	0.42	2.0	ng/l	20.0		102	70-130			
PFUnA	25.3	0.48	2.0	ng/l	20.0		127	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	40.1			ng/l	40.0		100	70-130			
13C2-PFHxA	41.3			ng/l	40.0		103	70-130			
d5-EtFOSAA	181			ng/l	160		113	70-130			
HFPO-DA-13C3	41.1			ng/l	40.0		103	70-130			
LCS Dup (W3J1300-BSD1)						Prepared: 10/16/23 Analyzed: 10/18/23					
11CI-PF3OUdS	25.1	0.56	2.0	ng/l	20.0		125	70-130	1	30	
9CI-PF3ONS	24.4	0.53	2.0	ng/l	20.0		122	70-130	3	30	
ADONA	19.7	0.55	2.0	ng/l	20.0		99	70-130	19	30	
EtFOSAA	26.0	0.48	2.0	ng/l	20.0		130	70-130	4	30	
HFPO-DA	21.3	0.87	2.0	ng/l	20.0		107	70-130	16	30	
MeFOSAA	26.7	0.58	2.0	ng/l	20.0		133	70-130	0.6	30	Q-08
PFBS	22.1	0.58	2.0	ng/l	20.0		110	70-130	15	30	
PFDA	21.5	0.45	2.0	ng/l	20.0		108	70-130	3	30	
PFDoA	23.1	0.66	2.0	ng/l	20.0		116	70-130	2	30	
PFHpA	20.4	0.53	2.0	ng/l	20.0		102	70-130	17	30	
PFHxA	20.5	0.49	2.0	ng/l	20.0		102	70-130	16	30	
PFHxS	21.4	0.59	2.0	ng/l	20.0		107	70-130	16	30	
PFNA	22.8	0.52	2.0	ng/l	20.0		114	70-130	7	30	
PFOA	22.1	0.67	2.0	ng/l	20.0		111	70-130	13	30	
PFOS	22.6	0.53	2.0	ng/l	20.0		113	70-130	7	30	
PFTeDA	24.9	0.45	2.0	ng/l	20.0		125	70-130	1	30	
PFTTrDA	20.4	0.42	2.0	ng/l	20.0		102	70-130	0.1	30	
PFUnA	24.3	0.48	2.0	ng/l	20.0		122	70-130	4	30	
<i>Surrogate(s)</i>											
13C2-PFDA	38.8			ng/l	40.0		97	70-130			
13C2-PFHxA	35.1			ng/l	40.0		88	70-130			
d5-EtFOSAA	177			ng/l	160		111	70-130			
HFPO-DA-13C3	34.9			ng/l	40.0		87	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2											
Blank (W3J0917-BLK1)											
						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
Blank (W3J0917-BLK1)						Prepared: 10/11/23 Analyzed: 10/12/23					
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.5			ug/l	50.0		89	70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91	70-130			
LCS (W3J0917-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	4.65	0.24	0.50	ug/l	5.00		93	70-130			
1,1,1-Trichloroethane	4.43	0.26	0.50	ug/l	5.00		89	70-130			
1,1,2,2-Tetrachloroethane	4.66	0.20	0.50	ug/l	5.00		93	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)										
LCS (W3J0917-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,2-Trichloroethane	4.82	0.19	0.50	ug/l	5.00		96 70-130			
1,1-Dichloroethane	5.09	0.27	0.50	ug/l	5.00		102 70-130			
1,1-Dichloroethene	5.21	0.16	0.50	ug/l	5.00		104 70-130			
1,1-Dichloropropene	4.61	0.14	0.50	ug/l	5.00		92 70-130			
1,2,3-Trichlorobenzene	4.07	0.40	0.50	ug/l	5.00		81 70-130			
1,2,3-Trichloropropane	4.69	0.22	0.50	ug/l	5.00		94 70-130			
1,2,4-Trichlorobenzene	4.35	0.17	0.50	ug/l	5.00		87 70-130			
1,2,4-Trimethylbenzene	4.67	0.20	0.50	ug/l	5.00		93 70-130			
1,2-Dichloroethane	4.55	0.24	0.50	ug/l	5.00		91 70-130			
1,2-Dichloropropane	4.54	0.13	0.50	ug/l	5.00		91 70-130			
1,3,5-Trimethylbenzene	4.63	0.17	0.50	ug/l	5.00		93 70-130			
1,3-Dichloropropane	4.84	0.27	0.50	ug/l	5.00		97 70-130			
2,2-Dichloropropane	4.05	0.17	0.50	ug/l	5.00		81 70-130			
2-Butanone	4.18	1.5	5.0	ug/l	5.00		84 70-130			J
2-Chlorotoluene	4.58	0.15	0.50	ug/l	5.00		92 70-130			
2-Hexanone	4.56	1.2	5.0	ug/l	5.00		91 70-130			J
4-Chlorotoluene	4.46	0.15	0.50	ug/l	5.00		89 70-130			
4-Methyl-2-pentanone	4.38	1.8	5.0	ug/l	5.00		88 70-130			J
Acetone	48.9	3.1	5.0	ug/l	50.0		98 70-130			
Benzene	4.66	0.15	0.50	ug/l	5.00		93 70-130			
Bromobenzene	4.64	0.15	0.50	ug/l	5.00		93 70-130			
Bromochloromethane	4.97	0.15	0.50	ug/l	5.00		99 70-130			
Bromodichloromethane	4.43	0.24	0.50	ug/l	5.00		89 70-130			
Bromoform	4.34	0.38	0.50	ug/l	5.00		87 70-130			
Bromomethane	6.84	0.27	0.50	ug/l	5.00		137 70-130			Q-08
Carbon Disulfide	5.03	0.25	0.50	ug/l	5.00		101 70-130			
Carbon tetrachloride	4.43	0.27	0.50	ug/l	5.00		89 70-130			
Chlorobenzene	4.73	0.15	0.50	ug/l	5.00		95 70-130			
Chloroethane	6.51	0.17	0.50	ug/l	5.00		130 70-130			
Chloroform	4.96	0.27	0.50	ug/l	5.00		99 70-130			
Chloromethane	5.13	0.23	0.50	ug/l	5.00		103 70-130			
cis-1,2-Dichloroethene	4.74	0.25	0.50	ug/l	5.00		95 70-130			
cis-1,3-Dichloropropene	4.15	0.30	0.50	ug/l	5.00		83 70-130			
Dibromochloromethane	4.53	0.20	0.50	ug/l	5.00		91 70-130			
Dibromomethane	4.77	0.20	0.50	ug/l	5.00		95 70-130			
Dichlorodifluoromethane (Freon 12)	4.39	0.45	0.50	ug/l	5.00		88 70-130			
Di-isopropyl ether	20.4	1.1	2.0	ug/l	20.0		102 70-130			
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100 70-130			
Ethylbenzene	4.27	0.21	0.50	ug/l	5.00		85 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS (W3J0917-BS1)						Prepared: 10/11/23 Analyzed: 10/12/23					
Freon 113	4.95	1.5	5.0	ug/l	5.00		99	70-130			J
Hexachlorobutadiene	4.29	0.40	0.50	ug/l	5.00		86	70-130			
Isopropylbenzene	4.47	0.18	0.50	ug/l	5.00		89	70-130			
m,p-Xylene	4.51	0.33	0.50	ug/l	5.00		90	70-130			
m-Dichlorobenzene	4.59	0.14	0.50	ug/l	5.00		92	70-130			
Methyl tert-butyl ether (MTBE)	18.6	0.94	2.0	ug/l	20.0		93	70-130			
Methylene chloride	4.91	0.30	0.50	ug/l	5.00		98	70-130			
Naphthalene	4.40	0.35	0.50	ug/l	5.00		88	70-130			
n-Butylbenzene	4.35	0.29	0.50	ug/l	5.00		87	70-130			
n-Propylbenzene	4.65	0.18	0.50	ug/l	5.00		93	70-130			
o-Dichlorobenzene	5.06	0.19	0.50	ug/l	5.00		101	70-130			
o-Xylene	4.75	0.20	0.50	ug/l	5.00		95	70-130			
p-Dichlorobenzene	4.98	0.18	0.50	ug/l	5.00		100	70-130			
p-Isopropyltoluene	4.60	0.25	0.50	ug/l	5.00		92	70-130			
sec-Butylbenzene	4.59	0.24	0.50	ug/l	5.00		92	70-130			
Styrene	4.73	0.19	0.50	ug/l	5.00		95	70-130			
Tert-amyl methyl ether	18.5	0.59	2.0	ug/l	20.0		92	70-130			
tert-Butylbenzene	4.55	0.18	0.50	ug/l	5.00		91	70-130			
Tetrachloroethene	4.18	0.18	0.50	ug/l	5.00		84	70-130			
Toluene	4.78	0.29	0.50	ug/l	5.00		96	70-130			
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100	70-130			
trans-1,3-Dichloropropene	4.57	0.32	0.50	ug/l	5.00		91	70-130			
Trichloroethene	4.21	0.18	0.50	ug/l	5.00		84	70-130			
Trichlorofluoromethane	5.91	0.18	0.50	ug/l	5.00		118	70-130			
Vinyl chloride	4.97	0.18	0.50	ug/l	5.00		99	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.1			ug/l	50.0		106	70-130			
4-Bromofluorobenzene	51.5			ug/l	50.0		103	70-130			
LCS Dup (W3J0917-BSD1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.81	0.24	0.50	ug/l	5.00		116	70-130	22	30	
1,1,1-Trichloroethane	4.82	0.26	0.50	ug/l	5.00		96	70-130	9	30	
1,1,2,2-Tetrachloroethane	5.43	0.20	0.50	ug/l	5.00		109	70-130	15	30	
1,1,2-Trichloroethane	5.71	0.19	0.50	ug/l	5.00		114	70-130	17	30	
1,1-Dichloroethane	4.80	0.27	0.50	ug/l	5.00		96	70-130	6	30	
1,1-Dichloroethene	5.29	0.16	0.50	ug/l	5.00		106	70-130	1	30	
1,1-Dichloropropene	5.89	0.14	0.50	ug/l	5.00		118	70-130	24	30	
1,2,3-Trichlorobenzene	4.82	0.40	0.50	ug/l	5.00		96	70-130	17	30	
1,2,3-Trichloropropane	5.45	0.22	0.50	ug/l	5.00		109	70-130	15	30	
1,2,4-Trichlorobenzene	5.22	0.17	0.50	ug/l	5.00		104	70-130	18	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)						Prepared: 10/11/23 Analyzed: 10/12/23					
1,2,4-Trimethylbenzene	5.38	0.20	0.50	ug/l	5.00		108	70-130	14	30	
1,2-Dichloroethane	5.84	0.24	0.50	ug/l	5.00		117	70-130	25	30	
1,2-Dichloropropane	5.59	0.13	0.50	ug/l	5.00		112	70-130	21	30	
1,3,5-Trimethylbenzene	5.31	0.17	0.50	ug/l	5.00		106	70-130	14	30	
1,3-Dichloropropane	5.67	0.27	0.50	ug/l	5.00		113	70-130	16	30	
2,2-Dichloropropane	4.83	0.17	0.50	ug/l	5.00		97	70-130	18	30	
2-Butanone	4.92	1.5	5.0	ug/l	5.00		98	70-130	16	30	J
2-Chlorotoluene	5.14	0.15	0.50	ug/l	5.00		103	70-130	11	30	
2-Hexanone	5.27	1.2	5.0	ug/l	5.00		105	70-130	14	30	
4-Chlorotoluene	5.01	0.15	0.50	ug/l	5.00		100	70-130	12	30	
4-Methyl-2-pentanone	5.68	1.8	5.0	ug/l	5.00		114	70-130	26	30	
Acetone	51.5	3.1	5.0	ug/l	50.0		103	70-130	5	30	
Benzene	5.58	0.15	0.50	ug/l	5.00		112	70-130	18	30	
Bromobenzene	5.38	0.15	0.50	ug/l	5.00		108	70-130	15	30	
Bromochloromethane	4.16	0.15	0.50	ug/l	5.00		83	70-130	18	30	
Bromodichloromethane	5.77	0.24	0.50	ug/l	5.00		115	70-130	26	30	
Bromoform	5.26	0.38	0.50	ug/l	5.00		105	70-130	19	30	
Bromomethane	4.28	0.27	0.50	ug/l	5.00		86	70-130	46	30	A-01
Carbon Disulfide	4.80	0.25	0.50	ug/l	5.00		96	70-130	5	30	
Carbon tetrachloride	5.86	0.27	0.50	ug/l	5.00		117	70-130	28	30	
Chlorobenzene	5.54	0.15	0.50	ug/l	5.00		111	70-130	16	30	
Chloroethane	4.18	0.17	0.50	ug/l	5.00		84	70-130	44	30	Q-12
Chloroform	4.42	0.27	0.50	ug/l	5.00		88	70-130	12	30	
Chloromethane	4.20	0.23	0.50	ug/l	5.00		84	70-130	20	30	
cis-1,2-Dichloroethene	4.71	0.25	0.50	ug/l	5.00		94	70-130	0.5	30	
cis-1,3-Dichloropropene	5.46	0.30	0.50	ug/l	5.00		109	70-130	27	30	
Dibromochloromethane	5.34	0.20	0.50	ug/l	5.00		107	70-130	17	30	
Dibromomethane	5.44	0.20	0.50	ug/l	5.00		109	70-130	13	30	
Dichlorodifluoromethane (Freon 12)	5.04	0.45	0.50	ug/l	5.00		101	70-130	14	30	
Di-isopropyl ether	21.8	1.1	2.0	ug/l	20.0		109	70-130	6	30	
Ethyl tert-butyl ether	21.3	1.0	2.0	ug/l	20.0		107	70-130	7	30	
Ethylbenzene	5.23	0.21	0.50	ug/l	5.00		105	70-130	20	30	
Freon 113	5.51	1.5	5.0	ug/l	5.00		110	70-130	11	30	
Hexachlorobutadiene	5.03	0.40	0.50	ug/l	5.00		101	70-130	16	30	
Isopropylbenzene	5.26	0.18	0.50	ug/l	5.00		105	70-130	16	30	
m,p-Xylene	5.17	0.33	0.50	ug/l	5.00		103	70-130	14	30	
m-Dichlorobenzene	5.11	0.14	0.50	ug/l	5.00		102	70-130	11	30	
Methyl tert-butyl ether (MTBE)	20.8	0.94	2.0	ug/l	20.0		104	70-130	11	30	
Methylene chloride	4.68	0.30	0.50	ug/l	5.00		94	70-130	5	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0917 - EPA 524.2 (Continued)											
LCS Dup (W3J0917-BSD1)											
					Prepared: 10/11/23 Analyzed: 10/12/23						
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99	70-130	12	30	
n-Butylbenzene	5.14	0.29	0.50	ug/l	5.00		103	70-130	17	30	
n-Propylbenzene	5.28	0.18	0.50	ug/l	5.00		106	70-130	13	30	
o-Dichlorobenzene	5.48	0.19	0.50	ug/l	5.00		110	70-130	8	30	
o-Xylene	5.38	0.20	0.50	ug/l	5.00		108	70-130	12	30	
p-Dichlorobenzene	5.53	0.18	0.50	ug/l	5.00		111	70-130	10	30	
p-Isopropyltoluene	5.27	0.25	0.50	ug/l	5.00		105	70-130	14	30	
sec-Butylbenzene	5.24	0.24	0.50	ug/l	5.00		105	70-130	13	30	
Styrene	5.32	0.19	0.50	ug/l	5.00		106	70-130	12	30	
Tert-amyl methyl ether	24.1	0.59	2.0	ug/l	20.0		120	70-130	26	30	
tert-Butylbenzene	5.07	0.18	0.50	ug/l	5.00		101	70-130	11	30	
Tetrachloroethene	5.27	0.18	0.50	ug/l	5.00		105	70-130	23	30	
Toluene	5.88	0.29	0.50	ug/l	5.00		118	70-130	21	30	
trans-1,2-Dichloroethene	4.85	0.26	0.50	ug/l	5.00		97	70-130	2	30	
trans-1,3-Dichloropropene	5.62	0.32	0.50	ug/l	5.00		112	70-130	21	30	
Trichloroethene	5.31	0.18	0.50	ug/l	5.00		106	70-130	23	30	
Trichlorofluoromethane	5.26	0.18	0.50	ug/l	5.00		105	70-130	12	30	
Vinyl chloride	4.46	0.18	0.50	ug/l	5.00		89	70-130	11	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	52.5			ug/l	50.0		105	70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/20/2023 16:18

Notes and Definitions

Item	Definition
A-01	The RPD result exceeded the QC control limits. The batch was accepted based on acceptable LCSD & CCVs.
J	Estimated conc. detected <MRL and >MDL.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **35091031**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kinde		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com						Charges will apply for weekends/holidays	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	COMMENTS
	10/4/23	16:35	G	PT-GAC15-S23	9	X	X	X	X	
	10/4/23	17:00	G	PT-GAC15-S11	9	X	X	X	X	
	10/4/23	16:25	G	PT-GAC14-S11	9	X	X	X	X	
	10/4/23	15:50	G	PT-GAC20-S11	9	X	X	X	X	
	10/4/23	16:00	G	PT-GAC14-S23	9	X	X	X	X	
	10/4/23	15:25	G	PT-GAC20-S23	9	X	X	X	X	

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 2:25	RECEIVED BY <i>[Signature]</i>	SAMPLE CONDITION: Actual Temperature: 4.0 Y-0261 Received On Ice: <input type="checkbox"/> Preserved: <input checked="" type="checkbox"/> Evidence Seals Present: <input checked="" type="checkbox"/> Container Attacked: <input type="checkbox"/> Preserved at Lab: <input type="checkbox"/>	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 4:10	RECEIVED BY <i>[Signature]</i>		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



Sample Receipt Checklist

Weck WKO: 3109031

Date/Time Received: 10/05/23 16:14

WKO Logged by: Jaime Gomez

of Samples: 06

Samples Checked by: Jaime Gomez

Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		4.9 °C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Amt added

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: 10/09/23

Work Orders: 3J09032

Report Date: 11/03/2023

Project: COSM 97-005

Received Date: 10/09/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

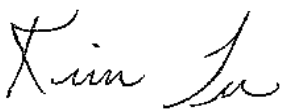
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/09/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Certificate of Analysis

FINAL REPORT

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV20-S9	Client	3J09032-01	Water	10/04/23 14:50	
PT-UV20-S9D	Client	3J09032-02	Water	10/04/23 14:50	
PT-UV15-S9	Client	3J09032-03	Water	10/04/23 16:00	
PT-UV15-S9D	Client	3J09032-04	Water	10/04/23 16:00	
PT-UV14-S9	Client	3J09032-05	Water	10/04/23 15:25	
PT-UV14-S9D	Client	3J09032-06	Water	10/04/23 15:25	
PT-UV8-S9	Client	3J09032-07	Water	10/04/23 09:10	
PT-UV8-S9D	Client	3J09032-08	Water	10/04/23 09:10	
PT-UV18-S9	Client	3J09032-09	Water	10/04/23 14:20	
PT-UV18-S9D	Client	3J09032-10	Water	10/04/23 14:20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV20-S9
 3J09032-01 (Water) Sampled: 10/04/23 14:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.60	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	2.9	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.61	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.8	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV20-S9
3J09032-01 (Water) Sampled: 10/04/23 14:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
Chloromethane	0.48	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	1.1	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	16	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.8		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	36	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV20-S9
3J09032-01 (Water) Sampled: 10/04/23 14:50 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1154 **Preparation:** EPA 5030B **Prepared:** 10/12/23 14:51 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	81%	Conc: 40.5	70-130			10/12/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	84%	Conc: 41.8	70-130			10/12/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV20-S9
3J09032-01RE1 (Water) Sampled: 10/04/23 14:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	210	2.8	7.0	ug/l	100	10/18/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	92%	Conc: 9.29	70-130			10/18/23	
----------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV20-S9D
3J09032-02RE1 (Water) Sampled: 10/04/23 14:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	190	2.8	7.0	ug/l	100	10/18/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	83%	Conc: 8.38	70-130			10/18/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV15-S9
3J09032-03 (Water) Sampled: 10/04/23 16:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51			Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.64	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	2.4	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.55	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.6	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV15-S9
3J09032-03 (Water) Sampled: 10/04/23 16:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
Chloromethane	0.26	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	1.0	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	15	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.6		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	35	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV15-S9
 3J09032-03 (Water) Sampled: 10/04/23 16:00 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1154 **Preparation:** EPA 5030B **Prepared:** 10/12/23 14:51 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.3	70-130			10/12/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	86%	Conc: 42.9	70-130			10/12/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV15-S9
 3J09032-03RE1 (Water) Sampled: 10/04/23 16:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	27	1.4	3.5	ug/l	50	10/18/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	96%	Conc: 9.66	70-130			10/18/23	
----------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV15-S9D
 3J09032-04RE1 (Water) Sampled: 10/04/23 16:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	25	1.4	3.5	ug/l	50	10/18/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	79%	Conc: 7.85	70-130			10/18/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV14-S9
3J09032-05 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51			Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.64	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	3.4	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.60	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.7	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV14-S9
3J09032-05 (Water) Sampled: 10/04/23 15:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Chloromethane	0.24	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	1.1	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	15	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.7		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	37	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV14-S9
3J09032-05 (Water) Sampled: 10/04/23 15:25 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1154 **Preparation:** EPA 5030B **Prepared:** 10/12/23 14:51 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	86%	Conc: 42.9	70-130			10/12/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	88%	Conc: 44.2	70-130			10/12/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV14-S9
3J09032-05RE1 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	30	1.4	3.5	ug/l	50	10/18/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	99%	Conc: 9.90	70-130			10/18/23	
----------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV14-S9D
3J09032-06RE1 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	29	1.4	3.5	ug/l	50	10/18/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	89%	Conc: 9.13	70-130			10/18/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S9
3J09032-07 (Water) Sampled: 10/04/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.64	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	2.8	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.62	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	4.8	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S9
3J09032-07 (Water) Sampled: 10/04/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
Chloromethane	0.31	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	1.2	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	14	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	4.8		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	35	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	0.20	0.18	0.50	ug/l	1	10/12/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S9
3J09032-07 (Water) Sampled: 10/04/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1154 **Preparation:** EPA 5030B **Prepared:** 10/12/23 14:51 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	86%	Conc: 42.9	70-130			10/12/23	
4-Bromofluorobenzene	89%	Conc: 44.7	70-130			10/12/23	

Sample Results

(Continued)

Sample: PT-UV8-S9
3J09032-07RE1 (Water) Sampled: 10/04/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	26	1.4	3.5	ug/l	50	10/18/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	76%	Conc: 7.42	70-130			10/18/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S9D
3J09032-08 (Water) Sampled: 10/04/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.54	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	2.8	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.62	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	4.0	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S9D
3J09032-08 (Water) Sampled: 10/04/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
Chloromethane	0.34	0.23	0.50	ug/l	1	10/12/23	J
cis-1,2-Dichloroethene	0.96	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	15	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	4.0		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	35	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	0.18	0.18	0.50	ug/l	1	10/12/23	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S9D
3J09032-08 (Water) Sampled: 10/04/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1154 **Preparation:** EPA 5030B **Prepared:** 10/12/23 14:51 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.5	70-130			10/12/23	
4-Bromofluorobenzene	87%	Conc: 43.7	70-130			10/12/23	

Sample Results

(Continued)

Sample: PT-UV8-S9D
3J09032-08RE1 (Water) Sampled: 10/04/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	25	1.4	3.5	ug/l	50	10/18/23	M-06
-------------	----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	76%	Conc: 7.49	70-130			10/18/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV18-S9
3J09032-09 (Water) Sampled: 10/04/23 14:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.59	0.27	0.50	ug/l	1	10/12/23	
1,1-Dichloroethene	2.2	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	ND	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.53	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.2	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV18-S9
3J09032-09 (Water) Sampled: 10/04/23 14:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	0.92	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	13	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.2		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/12/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/12/23	
Trichloroethene	32	0.18	0.50	ug/l	1	10/12/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/12/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV18-S9
3J09032-09 (Water) Sampled: 10/04/23 14:20 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1154 **Preparation:** EPA 5030B **Prepared:** 10/12/23 14:51 **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/12/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	82%	Conc: 40.8	70-130			10/12/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	87%	Conc: 43.5	70-130			10/12/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV18-S9
3J09032-09RE1 (Water) Sampled: 10/04/23 14:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	380	2.8	7.0	ug/l	100	10/18/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	108%	Conc: 10.6	70-130			10/18/23	
----------------	------	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV18-S9D
3J09032-10RE1 (Water) Sampled: 10/04/23 14:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1185 **Preparation:** EPA 522/SPE **Prepared:** 10/13/23 08:02 **Analyst:** mld

1,4-Dioxane	470	2.8	7.0	ug/l	100	10/18/23	M-06
-------------	-----	-----	-----	------	-----	----------	------

Surrogate(s)

1,4-Dioxane-d8	118%	Conc: 12.1	70-130			10/18/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1185 - EPA 522											
Blank (W3J1185-BLK1)						Prepared: 10/13/23 Analyzed: 10/18/23					
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.73			ug/l	10.0		97	70-130			
LCS (W3J1185-BS1)						Prepared: 10/13/23 Analyzed: 10/18/23					
1,4-Dioxane	1.93	0.028	0.070	ug/l	2.00		96	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.94			ug/l	10.0		99	70-130			
LCS Dup (W3J1185-BSD1)						Prepared: 10/13/23 Analyzed: 10/18/23					
1,4-Dioxane	1.85	0.028	0.070	ug/l	2.00		93	70-130	4	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.56			ug/l	10.0		96	70-130			

Quality Control Results

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2											
Blank (W3J1154-BLK1)						Prepared & Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
Blank (W3J1154-BLK1)					Prepared & Analyzed: 10/12/23						
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/03/2023 16:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
Blank (W3J1154-BLK1)						Prepared & Analyzed: 10/12/23					
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.2			ug/l	50.0		80	70-130			
4-Bromofluorobenzene	42.2			ug/l	50.0		84	70-130			
LCS (W3J1154-BS1)						Prepared & Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.43	0.24	0.50	ug/l	5.00		109	70-130			
1,1,1-Trichloroethane	5.28	0.26	0.50	ug/l	5.00		106	70-130			
1,1,2,2-Tetrachloroethane	5.08	0.20	0.50	ug/l	5.00		102	70-130			
1,1,2-Trichloroethane	5.32	0.19	0.50	ug/l	5.00		106	70-130			
1,1-Dichloroethane	4.55	0.27	0.50	ug/l	5.00		91	70-130			
1,1-Dichloroethene	4.87	0.16	0.50	ug/l	5.00		97	70-130			
1,1-Dichloropropene	5.16	0.14	0.50	ug/l	5.00		103	70-130			
1,2,3-Trichlorobenzene	4.59	0.40	0.50	ug/l	5.00		92	70-130			
1,2,3-Trichloropropane	5.23	0.22	0.50	ug/l	5.00		105	70-130			
1,2,4-Trichlorobenzene	5.02	0.17	0.50	ug/l	5.00		100	70-130			
1,2,4-Trimethylbenzene	5.11	0.20	0.50	ug/l	5.00		102	70-130			
1,2-Dichloroethane	5.13	0.24	0.50	ug/l	5.00		103	70-130			
1,2-Dichloropropane	5.02	0.13	0.50	ug/l	5.00		100	70-130			
1,3,5-Trimethylbenzene	5.06	0.17	0.50	ug/l	5.00		101	70-130			
1,3-Dichloropropane	5.33	0.27	0.50	ug/l	5.00		107	70-130			
2,2-Dichloropropane	4.76	0.17	0.50	ug/l	5.00		95	70-130			
2-Butanone	4.54	1.5	5.0	ug/l	5.00		91	70-130			J
2-Chlorotoluene	4.85	0.15	0.50	ug/l	5.00		97	70-130			
2-Hexanone	4.98	1.2	5.0	ug/l	5.00		100	70-130			J
4-Chlorotoluene	4.76	0.15	0.50	ug/l	5.00		95	70-130			
4-Methyl-2-pentanone	4.87	1.8	5.0	ug/l	5.00		97	70-130			J
Acetone	49.6	3.1	5.0	ug/l	50.0		99	70-130			
Benzene	5.14	0.15	0.50	ug/l	5.00		103	70-130			
Bromobenzene	5.03	0.15	0.50	ug/l	5.00		101	70-130			
Bromochloromethane	4.48	0.15	0.50	ug/l	5.00		90	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
LCS (W3J1154-BS1)					Prepared & Analyzed: 10/12/23						
Bromodichloromethane	5.14	0.24	0.50	ug/l	5.00		103	70-130			
Bromoform	4.97	0.38	0.50	ug/l	5.00		99	70-130			
Bromomethane	4.25	0.27	0.50	ug/l	5.00		85	70-130			
Carbon Disulfide	4.56	0.25	0.50	ug/l	5.00		91	70-130			
Carbon tetrachloride	5.04	0.27	0.50	ug/l	5.00		101	70-130			
Chlorobenzene	5.28	0.15	0.50	ug/l	5.00		106	70-130			
Chloroethane	4.04	0.17	0.50	ug/l	5.00		81	70-130			
Chloroform	4.82	0.27	0.50	ug/l	5.00		96	70-130			
Chloromethane	4.04	0.23	0.50	ug/l	5.00		81	70-130			
cis-1,2-Dichloroethene	4.61	0.25	0.50	ug/l	5.00		92	70-130			
cis-1,3-Dichloropropene	4.79	0.30	0.50	ug/l	5.00		96	70-130			
Dibromochloromethane	5.10	0.20	0.50	ug/l	5.00		102	70-130			
Dibromomethane	5.13	0.20	0.50	ug/l	5.00		103	70-130			
Dichlorodifluoromethane (Freon 12)	4.54	0.45	0.50	ug/l	5.00		91	70-130			
Di-isopropyl ether	20.5	1.1	2.0	ug/l	20.0		102	70-130			
Ethyl tert-butyl ether	19.7	1.0	2.0	ug/l	20.0		99	70-130			
Ethylbenzene	4.89	0.21	0.50	ug/l	5.00		98	70-130			
Freon 113	5.08	1.5	5.0	ug/l	5.00		102	70-130			
Hexachlorobutadiene	4.85	0.40	0.50	ug/l	5.00		97	70-130			
Isopropylbenzene	4.83	0.18	0.50	ug/l	5.00		97	70-130			
m,p-Xylene	4.90	0.33	0.50	ug/l	5.00		98	70-130			
m-Dichlorobenzene	4.88	0.14	0.50	ug/l	5.00		98	70-130			
Methyl tert-butyl ether (MTBE)	19.1	0.94	2.0	ug/l	20.0		96	70-130			
Methylene chloride	4.45	0.30	0.50	ug/l	5.00		89	70-130			
Naphthalene	4.82	0.35	0.50	ug/l	5.00		96	70-130			
n-Butylbenzene	4.89	0.29	0.50	ug/l	5.00		98	70-130			
n-Propylbenzene	5.01	0.18	0.50	ug/l	5.00		100	70-130			
o-Dichlorobenzene	5.27	0.19	0.50	ug/l	5.00		105	70-130			
o-Xylene	5.05	0.20	0.50	ug/l	5.00		101	70-130			
p-Dichlorobenzene	5.27	0.18	0.50	ug/l	5.00		105	70-130			
p-Isopropyltoluene	5.00	0.25	0.50	ug/l	5.00		100	70-130			
sec-Butylbenzene	4.87	0.24	0.50	ug/l	5.00		97	70-130			
Styrene	5.04	0.19	0.50	ug/l	5.00		101	70-130			
Tert-amyl methyl ether	21.6	0.59	2.0	ug/l	20.0		108	70-130			
tert-Butylbenzene	4.80	0.18	0.50	ug/l	5.00		96	70-130			
Tetrachloroethene	4.87	0.18	0.50	ug/l	5.00		97	70-130			
Toluene	5.34	0.29	0.50	ug/l	5.00		107	70-130			
trans-1,2-Dichloroethene	4.59	0.26	0.50	ug/l	5.00		92	70-130			
trans-1,3-Dichloropropene	5.20	0.32	0.50	ug/l	5.00		104	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
LCS (W3J1154-BS1)					Prepared & Analyzed: 10/12/23						
Trichloroethene	4.65	0.18	0.50	ug/l	5.00		93	70-130			
Trichlorofluoromethane	5.46	0.18	0.50	ug/l	5.00		109	70-130			
Vinyl chloride	4.25	0.18	0.50	ug/l	5.00		85	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	49.8			ug/l	50.0		100	70-130			
4-Bromofluorobenzene	48.4			ug/l	50.0		97	70-130			
LCS Dup (W3J1154-BSD1)					Prepared & Analyzed: 10/12/23						
1,1,1,2-Tetrachloroethane	5.30	0.24	0.50	ug/l	5.00		106	70-130	2	30	
1,1,1-Trichloroethane	4.89	0.26	0.50	ug/l	5.00		98	70-130	8	30	
1,1,2,2-Tetrachloroethane	5.28	0.20	0.50	ug/l	5.00		106	70-130	4	30	
1,1,2-Trichloroethane	5.31	0.19	0.50	ug/l	5.00		106	70-130	0.3	30	
1,1-Dichloroethane	4.59	0.27	0.50	ug/l	5.00		92	70-130	0.9	30	
1,1-Dichloroethene	4.99	0.16	0.50	ug/l	5.00		100	70-130	2	30	
1,1-Dichloropropene	4.82	0.14	0.50	ug/l	5.00		96	70-130	7	30	
1,2,3-Trichlorobenzene	4.59	0.40	0.50	ug/l	5.00		92	70-130	0.05	30	
1,2,3-Trichloropropane	5.27	0.22	0.50	ug/l	5.00		105	70-130	0.7	30	
1,2,4-Trichlorobenzene	4.95	0.17	0.50	ug/l	5.00		99	70-130	1	30	
1,2,4-Trimethylbenzene	4.93	0.20	0.50	ug/l	5.00		99	70-130	4	30	
1,2-Dichloroethane	5.14	0.24	0.50	ug/l	5.00		103	70-130	0.2	30	
1,2-Dichloropropane	4.96	0.13	0.50	ug/l	5.00		99	70-130	1	30	
1,3,5-Trimethylbenzene	4.82	0.17	0.50	ug/l	5.00		96	70-130	5	30	
1,3-Dichloropropane	5.23	0.27	0.50	ug/l	5.00		105	70-130	2	30	
2,2-Dichloropropane	4.66	0.17	0.50	ug/l	5.00		93	70-130	2	30	
2-Butanone	4.45	1.5	5.0	ug/l	5.00		89	70-130	2	30	J
2-Chlorotoluene	4.71	0.15	0.50	ug/l	5.00		94	70-130	3	30	
2-Hexanone	5.14	1.2	5.0	ug/l	5.00		103	70-130	3	30	
4-Chlorotoluene	4.51	0.15	0.50	ug/l	5.00		90	70-130	6	30	
4-Methyl-2-pentanone	4.81	1.8	5.0	ug/l	5.00		96	70-130	1	30	J
Acetone	52.0	3.1	5.0	ug/l	50.0		104	70-130	5	30	
Benzene	4.84	0.15	0.50	ug/l	5.00		97	70-130	6	30	
Bromobenzene	4.98	0.15	0.50	ug/l	5.00		100	70-130	0.9	30	
Bromochloromethane	4.41	0.15	0.50	ug/l	5.00		88	70-130	2	30	
Bromodichloromethane	5.11	0.24	0.50	ug/l	5.00		102	70-130	0.6	30	
Bromoform	5.01	0.38	0.50	ug/l	5.00		100	70-130	0.8	30	
Bromomethane	4.21	0.27	0.50	ug/l	5.00		84	70-130	0.8	30	
Carbon Disulfide	4.47	0.25	0.50	ug/l	5.00		89	70-130	2	30	
Carbon tetrachloride	4.89	0.27	0.50	ug/l	5.00		98	70-130	3	30	
Chlorobenzene	5.13	0.15	0.50	ug/l	5.00		103	70-130	3	30	
Chloroethane	4.09	0.17	0.50	ug/l	5.00		82	70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/03/2023 16:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
LCS Dup (W3J1154-BSD1)					Prepared & Analyzed: 10/12/23						
Chloroform	4.47	0.27	0.50	ug/l	5.00		89	70-130	8	30	
Chloromethane	4.18	0.23	0.50	ug/l	5.00		84	70-130	3	30	
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00		91	70-130	1	30	
cis-1,3-Dichloropropene	4.76	0.30	0.50	ug/l	5.00		95	70-130	0.8	30	
Dibromochloromethane	5.05	0.20	0.50	ug/l	5.00		101	70-130	1	30	
Dibromomethane	5.27	0.20	0.50	ug/l	5.00		105	70-130	3	30	
Dichlorodifluoromethane (Freon 12)	4.64	0.45	0.50	ug/l	5.00		93	70-130	2	30	
Di-isopropyl ether	20.3	1.1	2.0	ug/l	20.0		102	70-130	0.9	30	
Ethyl tert-butyl ether	19.8	1.0	2.0	ug/l	20.0		99	70-130	0.4	30	
Ethylbenzene	4.50	0.21	0.50	ug/l	5.00		90	70-130	8	30	
Freon 113	4.95	1.5	5.0	ug/l	5.00		99	70-130	3	30	J
Hexachlorobutadiene	4.71	0.40	0.50	ug/l	5.00		94	70-130	3	30	
Isopropylbenzene	4.53	0.18	0.50	ug/l	5.00		91	70-130	6	30	
m,p-Xylene	4.61	0.33	0.50	ug/l	5.00		92	70-130	6	30	
m-Dichlorobenzene	4.81	0.14	0.50	ug/l	5.00		96	70-130	1	30	
Methyl tert-butyl ether (MTBE)	19.6	0.94	2.0	ug/l	20.0		98	70-130	3	30	
Methylene chloride	4.53	0.30	0.50	ug/l	5.00		91	70-130	2	30	
Naphthalene	4.87	0.35	0.50	ug/l	5.00		97	70-130	1	30	
n-Butylbenzene	4.65	0.29	0.50	ug/l	5.00		93	70-130	5	30	
n-Propylbenzene	4.76	0.18	0.50	ug/l	5.00		95	70-130	5	30	
o-Dichlorobenzene	5.27	0.19	0.50	ug/l	5.00		105	70-130	0.1	30	
o-Xylene	4.83	0.20	0.50	ug/l	5.00		97	70-130	4	30	
p-Dichlorobenzene	5.22	0.18	0.50	ug/l	5.00		104	70-130	1	30	
p-Isopropyltoluene	4.77	0.25	0.50	ug/l	5.00		95	70-130	5	30	
sec-Butylbenzene	4.68	0.24	0.50	ug/l	5.00		94	70-130	4	30	
Styrene	4.82	0.19	0.50	ug/l	5.00		96	70-130	4	30	
Tert-amyl methyl ether	21.3	0.59	2.0	ug/l	20.0		106	70-130	1	30	
tert-Butylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130	5	30	
Tetrachloroethene	4.66	0.18	0.50	ug/l	5.00		93	70-130	5	30	
Toluene	5.10	0.29	0.50	ug/l	5.00		102	70-130	5	30	
trans-1,2-Dichloroethene	4.59	0.26	0.50	ug/l	5.00		92	70-130	0.1	30	
trans-1,3-Dichloropropene	5.08	0.32	0.50	ug/l	5.00		102	70-130	2	30	
Trichloroethene	4.47	0.18	0.50	ug/l	5.00		89	70-130	4	30	
Trichlorofluoromethane	4.34	0.18	0.50	ug/l	5.00		87	70-130	23	30	
Vinyl chloride	4.23	0.18	0.50	ug/l	5.00		85	70-130	0.5	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	51.3			ug/l	50.0		103	70-130			
4-Bromofluorobenzene	49.8			ug/l	50.0		100	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/03/2023 16:28

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # 3109032

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING									
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		<table border="1"> <tr> <td>EPA 522 1,4-dioxane</td> <td>EPA 524-2 VOCs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				EPA 522 1,4-dioxane	EPA 524-2 VOCs							<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input checked="" type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> GAVOC Data Package	
EPA 522 1,4-dioxane	EPA 524-2 VOCs																
PROJECT MANAGER Chris Kinde		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com		Charges will apply for weekends/holidays		Method of Shipment:		COMMENTS									

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524-2 VOCs											
	10/4/23	14:50	G	PT-UV20-S9	5	X	X											
		14:50	G	PT-UV20-S9D	2	X												
		16:00	G	PT-UV15-S9	5	X	X											
		16:00	G	PT-UV15-S9D	2	X												
		15:25	G	PT-UV14-S9	5	X	X											
		15:25	G	PT-UV14-S9D	2	X												
		9:10	G	PT-UV8-S9	5	X	X											
		9:10	G	PT-UV8-S9D	5	X	X											
		14:20	G	PT-UV18-S9	5	X	X											
	↓	14:20	G	PT-UV18-S9D	2	X												
				PT-UV20-S9														

RELINQUISHED BY 	DATE / TIME 10/5/23 2:22	RECEIVED BY 	SAMPLE CONDITION: Actual Temperature: 4.9 T-0261	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY 	DATE / TIME 10/5/23 4:10	RECEIVED BY 	Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	Y/N Y/N Y/N Y/N
RELINQUISHED BY 	DATE / TIME 10/5/23 16:14	RECEIVED BY 		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.

©2007 Weck Laboratories 04132016



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **3109032**

Date/Time Received: **10/5/2023 16:14**

WKO Logged by: **Jerald Ancheta**

of Samples: **10**

Samples Checked by: **Jerico Bolotano**

Delivered by: **RMS**

TASK	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4.9°C
Ice Type (Blue/Wet)				Wet
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2; 6710B<2; 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

pH paper Lot# _____
 pH Reading: _____
 Acid Lot# _____
 Amt. added: _____

Cl Test Strip Lot# _____
 <6mm/Pea Size?
 pH paper Lot# _____

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerald Ancheta

Date: 10/9/2023

Work Orders: 3J09033

Report Date: 11/20/2023

Project: COSM 97-005

Received Date: 10/5/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:14

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV20-S10	Client	3J09033-01	Water	10/04/23 14:50	
PT-UV15-S10	Client	3J09033-02	Water	10/04/23 10:00	
PT-UV14-S10	Client	3J09033-03	Water	10/04/23 15:25	
PT-UV18-S10	Client	3J09033-04	Water	10/04/23 14:20	
PT-UV7-S10	Client	3J09033-05	Water	10/04/23 08:50	
PT-UV8-S10	Client	3J09033-06	Water	10/04/23 09:10	
PT-UV8-S10D	Client	3J09033-07	Water	10/04/23 09:10	
PT-UV19-S10	Client	3J09033-08	Water	10/04/23 13:43	
Field Blank	Client	3J09033-09	Water	10/04/23 17:00	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFUnA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV20-S10
3J09033-01 (Water) Sampled: 10/04/23 14:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0921	Preparation: EPA 5030B			Prepared: 10/11/23 07:43	Analyst: ADM		
1,2,3-Trichloropropane	0.011	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1300	Preparation: EPA 537/SPE			Prepared: 10/16/23 10:12	Analyst: jna		
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/19/23	
ADONA	ND	0.48	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.76	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/19/23	
PFBS	3.7	0.50	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDoA	ND	0.57	1.7	ng/l	1	10/19/23	
PFHpA	1.5	0.47	1.7	ng/l	1	10/19/23	J
PFHxA	6.6	0.42	1.7	ng/l	1	10/19/23	
PFHxS	3.3	0.52	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	2.8	0.58	1.7	ng/l	1	10/19/23	
PFOS	ND	0.46	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	101%	Conc: 35.3	70-130	10/19/23
13C2-PFHxA	103%	Conc: 35.8	70-130	10/19/23
d5-EtFOSAA	114%	Conc: 159	70-130	10/19/23
HFPO-DA-13C3	105%	Conc: 36.7	70-130	10/19/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV15-S10
3J09033-02 (Water) Sampled: 10/04/23 10:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0921	Preparation: EPA 5030B			Prepared: 10/11/23 07:43	Analyst: ADM		
1,2,3-Trichloropropane	0.015	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1300	Preparation: EPA 537/SPE			Prepared: 10/16/23 10:12	Analyst: jna		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/19/23	
ADONA	ND	0.47	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.74	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.49	1.7	ng/l	1	10/19/23	
PFBS	3.6	0.49	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDoA	ND	0.56	1.7	ng/l	1	10/19/23	
PFHpA	1.4	0.46	1.7	ng/l	1	10/19/23	J
PFHxA	6.4	0.42	1.7	ng/l	1	10/19/23	
PFHxS	3.4	0.51	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	2.8	0.57	1.7	ng/l	1	10/19/23	
PFOS	ND	0.45	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	99%	Conc: 34.1	70-130	10/19/23
13C2-PFHxA	100%	Conc: 34.3	70-130	10/19/23
d5-EtFOSAA	115%	Conc: 157	70-130	10/19/23
HFPO-DA-13C3	100%	Conc: 34.1	70-130	10/19/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV14-S10
3J09033-03 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0921	Preparation: EPA 5030B			Prepared: 10/11/23 07:43	Analyst: ADM		
1,2,3-Trichloropropane	0.015	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1300	Preparation: EPA 537/SPE			Prepared: 10/16/23 10:12	Analyst: jna		
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	10/19/23	
ADONA	ND	0.55	2.0	ng/l	1	10/19/23	
EtFOSAA	ND	0.48	2.0	ng/l	1	10/19/23	
HFPO-DA	ND	0.87	2.0	ng/l	1	10/19/23	
MeFOSAA	ND	0.58	2.0	ng/l	1	10/19/23	
PFBS	3.0	0.58	2.0	ng/l	1	10/19/23	
PFDA	ND	0.45	2.0	ng/l	1	10/19/23	
PFDoA	ND	0.66	2.0	ng/l	1	10/19/23	
PFHpA	1.2	0.53	2.0	ng/l	1	10/19/23	J
PFHxA	5.1	0.49	2.0	ng/l	1	10/19/23	
PFHxS	2.7	0.59	2.0	ng/l	1	10/19/23	
PFNA	ND	0.52	2.0	ng/l	1	10/19/23	
PFOA	2.3	0.67	2.0	ng/l	1	10/19/23	
PFOS	ND	0.53	2.0	ng/l	1	10/19/23	
PFTeDA	ND	0.45	2.0	ng/l	1	10/19/23	
PFTrDA	ND	0.42	2.0	ng/l	1	10/19/23	
PFUnA	ND	0.48	2.0	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	97%	Conc: 35.8	70-130	10/19/23
13C2-PFHxA	80%	Conc: 29.6	70-130	10/19/23
d5-EtFOSAA	114%	Conc: 169	70-130	10/19/23
HFPO-DA-13C3	82%	Conc: 30.2	70-130	10/19/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV18-S10
3J09033-04 (Water) Sampled: 10/04/23 14:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0921		Preparation: EPA 5030B		Prepared: 10/11/23 07:43		Analyst: ADM	
1,2,3-Trichloropropane	0.010	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1300		Preparation: EPA 537/SPE		Prepared: 10/16/23 10:12		Analyst: jna	
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/19/23	
ADONA	ND	0.49	1.8	ng/l	1	10/19/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/19/23	
HFPO-DA	ND	0.78	1.8	ng/l	1	10/19/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/19/23	
PFBS	3.6	0.51	1.8	ng/l	1	10/19/23	
PFDA	ND	0.40	1.8	ng/l	1	10/19/23	
PFDoA	ND	0.58	1.8	ng/l	1	10/19/23	
PFHpA	1.4	0.48	1.8	ng/l	1	10/19/23	J
PFHxA	6.4	0.44	1.8	ng/l	1	10/19/23	
PFHxS	3.3	0.53	1.8	ng/l	1	10/19/23	
PFNA	ND	0.46	1.8	ng/l	1	10/19/23	
PFOA	2.7	0.60	1.8	ng/l	1	10/19/23	
PFOS	ND	0.47	1.8	ng/l	1	10/19/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/19/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/19/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	101%	Conc: 36.2	70-130	10/19/23
13C2-PFHxA	101%	Conc: 36.1	70-130	10/19/23
d5-EtFOSAA	114%	Conc: 164	70-130	10/19/23
HFPO-DA-13C3	101%	Conc: 36.0	70-130	10/19/23

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:14

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV7-S10
 3J09033-05 (Water) Sampled: 10/04/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0921	Preparation: EPA 5030B			Prepared: 10/11/23 07:43	Analyst: ADM		
1,2,3-Trichloropropane	0.017	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1300	Preparation: EPA 537/SPE			Prepared: 10/16/23 10:12	Analyst: jna		
11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.46	1.8	ng/l	1	10/19/23	
ADONA	ND	0.48	1.8	ng/l	1	10/19/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/19/23	
HFPO-DA	ND	0.76	1.8	ng/l	1	10/19/23	
MeFOSAA	ND	0.50	1.8	ng/l	1	10/19/23	
PFBS	3.6	0.51	1.8	ng/l	1	10/19/23	
PFDA	ND	0.40	1.8	ng/l	1	10/19/23	
PFDoA	ND	0.57	1.8	ng/l	1	10/19/23	
PFHpA	1.4	0.47	1.8	ng/l	1	10/19/23	J
PFHxA	6.3	0.43	1.8	ng/l	1	10/19/23	
PFHxS	3.2	0.52	1.8	ng/l	1	10/19/23	
PFNA	ND	0.46	1.8	ng/l	1	10/19/23	
PFOA	2.5	0.58	1.8	ng/l	1	10/19/23	
PFOS	ND	0.47	1.8	ng/l	1	10/19/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/19/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/19/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	100%	Conc: 35.0	70-130	10/19/23
13C2-PFHxA	101%	Conc: 35.4	70-130	10/19/23
d5-EtFOSAA	117%	Conc: 164	70-130	10/19/23
HFPO-DA-13C3	102%	Conc: 35.9	70-130	10/19/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S10
3J09033-06 (Water) Sampled: 10/04/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12
Batch ID: W3J0921	Preparation: EPA 5030B
Prepared: 10/11/23 07:43	Analyst: ADM
1,2,3-Trichloropropane	0.017

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06					
Batch ID: W3J1300	Preparation: EPA 537/SPE					
Prepared: 10/16/23 10:12	Analyst: jna					
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/19/23
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/19/23
ADONA	ND	0.49	1.8	ng/l	1	10/19/23
EtFOSAA	ND	0.43	1.8	ng/l	1	10/19/23
HFPO-DA	ND	0.77	1.8	ng/l	1	10/19/23
MeFOSAA	ND	0.51	1.8	ng/l	1	10/19/23
PFBS	3.7	0.51	1.8	ng/l	1	10/19/23
PFDA	ND	0.40	1.8	ng/l	1	10/19/23
PFDoA	ND	0.58	1.8	ng/l	1	10/19/23
PFHpA	1.4	0.48	1.8	ng/l	1	10/19/23
PFHxA	6.3	0.43	1.8	ng/l	1	10/19/23
PFHxS	3.3	0.53	1.8	ng/l	1	10/19/23
PFNA	ND	0.46	1.8	ng/l	1	10/19/23
PFOA	2.6	0.59	1.8	ng/l	1	10/19/23
PFOS	ND	0.47	1.8	ng/l	1	10/19/23
PFTeDA	ND	0.40	1.8	ng/l	1	10/19/23
PFTrDA	ND	0.37	1.8	ng/l	1	10/19/23
PFUnA	ND	0.42	1.8	ng/l	1	10/19/23

Surrogate(s)

13C2-PFDA	101%	Conc: 36.0	70-130	10/19/23
13C2-PFHxA	98%	Conc: 35.0	70-130	10/19/23
d5-EtFOSAA	118%	Conc: 169	70-130	10/19/23
HFPO-DA-13C3	101%	Conc: 35.9	70-130	10/19/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S10D
3J09033-07 (Water) Sampled: 10/04/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12						
Batch ID: W3J0921	Preparation: EPA 5030B						
Prepared: 10/11/23 07:43	Analyst: ADM						
1,2,3-Trichloropropane	0.017	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06						
Batch ID: W3J1462	Preparation: EPA 537/SPE						
Prepared: 10/17/23 13:52	Analyst: jna						
11CI-PF3OUdS	ND	0.51	1.8	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.48	1.8	ng/l	1	10/19/23	
ADONA	ND	0.50	1.8	ng/l	1	10/19/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/19/23	
HFPO-DA	2.5	0.79	1.8	ng/l	1	10/19/23	
MeFOSAA	ND	0.52	1.8	ng/l	1	10/19/23	
PFBS	3.4	0.52	1.8	ng/l	1	10/19/23	
PFDA	ND	0.41	1.8	ng/l	1	10/19/23	
PFDoA	ND	0.59	1.8	ng/l	1	10/19/23	
PFHpA	1.4	0.48	1.8	ng/l	1	10/19/23	J
PFHxA	6.2	0.44	1.8	ng/l	1	10/19/23	
PFHxS	3.2	0.54	1.8	ng/l	1	10/19/23	
PFNA	ND	0.47	1.8	ng/l	1	10/19/23	
PFOA	2.5	0.60	1.8	ng/l	1	10/19/23	
PFOS	ND	0.48	1.8	ng/l	1	10/19/23	
PFTeDA	ND	0.41	1.8	ng/l	1	10/19/23	
PFTrDA	ND	0.38	1.8	ng/l	1	10/19/23	
PFUnA	ND	0.43	1.8	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	105%	Conc: 38.0	70-130	10/19/23
13C2-PFHxA	99%	Conc: 35.8	70-130	10/19/23
d5-EtFOSAA	115%	Conc: 166	70-130	10/19/23
HFPO-DA-13C3	101%	Conc: 36.5	70-130	10/19/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV19-S10
3J09033-08 (Water) Sampled: 10/04/23 13:43 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W3J0921	Preparation: EPA 5030B			Prepared: 10/11/23 07:43	Analyst: ADM		
1,2,3-Trichloropropane	0.0093	0.0012	0.0050	ug/l	1	10/12/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W3J1462	Preparation: EPA 537/SPE			Prepared: 10/17/23 13:52	Analyst: jna		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/19/23	
ADONA	ND	0.47	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.49	1.7	ng/l	1	10/19/23	
PFBS	3.4	0.50	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDoA	ND	0.56	1.7	ng/l	1	10/19/23	
PFHpA	1.4	0.46	1.7	ng/l	1	10/19/23	J
PFHxA	6.3	0.42	1.7	ng/l	1	10/19/23	
PFHxS	3.1	0.51	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	2.7	0.57	1.7	ng/l	1	10/19/23	
PFOS	ND	0.46	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	110%	Conc: 37.6	70-130	10/19/23
13C2-PFHxA	97%	Conc: 33.3	70-130	10/19/23
d5-EtFOSAA	113%	Conc: 155	70-130	10/19/23
HFPO-DA-13C3	101%	Conc: 34.8	70-130	10/19/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:14

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: Field Blank
3J09033-09 (Water) Sampled: 10/04/23 17:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1462

Preparation: EPA 537/SPE

Prepared: 10/17/23 13:52

Analyst: jna

11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/19/23	
ADONA	ND	0.47	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.74	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.49	1.7	ng/l	1	10/19/23	
PFBS	ND	0.49	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDoA	ND	0.56	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	ND	0.57	1.7	ng/l	1	10/19/23	
PFOS	ND	0.45	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	101%	Conc: 34.7	70-130	10/19/23
13C2-PFHxA	98%	Conc: 33.6	70-130	10/19/23
d5-EtFOSAA	109%	Conc: 149	70-130	10/19/23
HFPO-DA-13C3	98%	Conc: 33.7	70-130	10/19/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0921 - SRL 524M-TCP											
Blank (W3J0921-BLK1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W3J0921-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	0.0202	0.0012	0.0050	ug/l	0.0200		101	80-120			
LCS Dup (W3J0921-BSD1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	0.0200	0.0012	0.0050	ug/l	0.0200		100	80-120	1	20	
Duplicate (W3J0921-DUP1)					Source: 3J09031-06 Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Quality Control Results

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J1300 - EPA 537.1											
Blank (W3J1300-BLK1)					Prepared: 10/16/23 Analyzed: 10/18/23						
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
Surrogate(s)											
13C2-PFDA	39.3			ng/l	40.0		98	70-130			
13C2-PFHxA	39.5			ng/l	40.0		99	70-130			
d5-EtFOSAA	174			ng/l	160		109	70-130			
HFPO-DA-13C3	39.0			ng/l	40.0		98	70-130			
LCS (W3J1300-BS1)					Prepared: 10/16/23 Analyzed: 10/18/23						
11CI-PF3OUdS	25.4	0.56	2.0	ng/l	20.0		127	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J1300 - EPA 537.1 (Continued)										
LCS (W3J1300-BS1)					Prepared: 10/16/23 Analyzed: 10/18/23					
9CI-PF3ONS	25.3	0.53	2.0	ng/l	20.0		126 70-130			
ADONA	23.9	0.55	2.0	ng/l	20.0		119 70-130			
EtFOSAA	27.1	0.48	2.0	ng/l	20.0		136 70-130			Q-08
HFPO-DA	25.0	0.87	2.0	ng/l	20.0		125 70-130			
MeFOSAA	26.5	0.58	2.0	ng/l	20.0		133 70-130			Q-08
PFBS	25.6	0.58	2.0	ng/l	20.0		128 70-130			
PFDA	22.2	0.45	2.0	ng/l	20.0		111 70-130			
PFDoA	23.7	0.66	2.0	ng/l	20.0		118 70-130			
PFHpA	24.3	0.53	2.0	ng/l	20.0		122 70-130			
PFHxA	23.9	0.49	2.0	ng/l	20.0		120 70-130			
PFHxS	25.0	0.59	2.0	ng/l	20.0		125 70-130			
PFNA	24.3	0.52	2.0	ng/l	20.0		122 70-130			
PFOA	25.3	0.67	2.0	ng/l	20.0		126 70-130			
PFOS	24.2	0.53	2.0	ng/l	20.0		121 70-130			
PFTeDA	25.2	0.45	2.0	ng/l	20.0		126 70-130			
PFTTrDA	20.4	0.42	2.0	ng/l	20.0		102 70-130			
PFUnA	25.3	0.48	2.0	ng/l	20.0		127 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	40.1			ng/l	40.0		100 70-130			
13C2-PFHxA	41.3			ng/l	40.0		103 70-130			
d5-EtFOSAA	181			ng/l	160		113 70-130			
HFPO-DA-13C3	41.1			ng/l	40.0		103 70-130			
LCS Dup (W3J1300-BSD1)					Prepared: 10/16/23 Analyzed: 10/18/23					
11CI-PF3OUdS	25.1	0.56	2.0	ng/l	20.0		125 70-130	1	30	
9CI-PF3ONS	24.4	0.53	2.0	ng/l	20.0		122 70-130	3	30	
ADONA	19.7	0.55	2.0	ng/l	20.0		99 70-130	19	30	
EtFOSAA	26.0	0.48	2.0	ng/l	20.0		130 70-130	4	30	
HFPO-DA	21.3	0.87	2.0	ng/l	20.0		107 70-130	16	30	
MeFOSAA	26.7	0.58	2.0	ng/l	20.0		133 70-130	0.6	30	Q-08
PFBS	22.1	0.58	2.0	ng/l	20.0		110 70-130	15	30	
PFDA	21.5	0.45	2.0	ng/l	20.0		108 70-130	3	30	
PFDoA	23.1	0.66	2.0	ng/l	20.0		116 70-130	2	30	
PFHpA	20.4	0.53	2.0	ng/l	20.0		102 70-130	17	30	
PFHxA	20.5	0.49	2.0	ng/l	20.0		102 70-130	16	30	
PFHxS	21.4	0.59	2.0	ng/l	20.0		107 70-130	16	30	
PFNA	22.8	0.52	2.0	ng/l	20.0		114 70-130	7	30	
PFOA	22.1	0.67	2.0	ng/l	20.0		111 70-130	13	30	
PFOS	22.6	0.53	2.0	ng/l	20.0		113 70-130	7	30	
PFTeDA	24.9	0.45	2.0	ng/l	20.0		125 70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J1300 - EPA 537.1 (Continued)										
LCS Dup (W3J1300-BSD1)					Prepared: 10/16/23 Analyzed: 10/18/23					
PFTTrDA	20.4	0.42	2.0	ng/l	20.0		102 70-130	0.1	30	
PFUnA	24.3	0.48	2.0	ng/l	20.0		122 70-130	4	30	
<i>Surrogate(s)</i>										
13C2-PFDA	38.8			ng/l	40.0		97 70-130			
13C2-PFHxA	35.1			ng/l	40.0		88 70-130			
d5-EtFOSAA	177			ng/l	160		111 70-130			
HFPO-DA-13C3	34.9			ng/l	40.0		87 70-130			
Batch: W3J1462 - EPA 537.1										
Blank (W3J1462-BLK1)					Prepared: 10/17/23 Analyzed: 10/19/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l						
9CI-PF3ONS	ND	0.53	2.0	ng/l						
ADONA	ND	0.55	2.0	ng/l						
EtFOSAA	ND	0.48	2.0	ng/l						
HFPO-DA	ND	0.87	2.0	ng/l						
MeFOSAA	ND	0.58	2.0	ng/l						
PFBS	ND	0.58	2.0	ng/l						
PFDA	ND	0.45	2.0	ng/l						
PFDaA	ND	0.66	2.0	ng/l						
PFHpA	ND	0.53	2.0	ng/l						
PFHxA	ND	0.49	2.0	ng/l						
PFHxS	ND	0.59	2.0	ng/l						
PFNA	ND	0.52	2.0	ng/l						
PFOA	ND	0.67	2.0	ng/l						
PFOS	ND	0.53	2.0	ng/l						
PFTeDA	ND	0.45	2.0	ng/l						
PFTTrDA	ND	0.42	2.0	ng/l						
PFUnA	ND	0.48	2.0	ng/l						
<i>Surrogate(s)</i>										
13C2-PFDA	38.4			ng/l	40.0		96 70-130			
13C2-PFHxA	40.2			ng/l	40.0		101 70-130			
d5-EtFOSAA	161			ng/l	160		101 70-130			
HFPO-DA-13C3	39.8			ng/l	40.0		100 70-130			
LCS (W3J1462-BS1)					Prepared: 10/17/23 Analyzed: 10/19/23					
11CI-PF3OUdS	1.93	0.56	2.0	ng/l	2.00		97 70-130			J
9CI-PF3ONS	2.14	0.53	2.0	ng/l	2.00		107 70-130			
ADONA	1.87	0.55	2.0	ng/l	2.00		94 70-130			J
EtFOSAA	1.98	0.48	2.0	ng/l	2.00		99 70-130			J
HFPO-DA	2.11	0.87	2.0	ng/l	2.00		105 70-130			
MeFOSAA	2.27	0.58	2.0	ng/l	2.00		114 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1462 - EPA 537.1 (Continued)											
LCS (W3J1462-BS1)						Prepared: 10/17/23 Analyzed: 10/19/23					
PFBS	2.07	0.58	2.0	ng/l	2.00		104	70-130			
PFDA	1.88	0.45	2.0	ng/l	2.00		94	70-130			J
PFDoA	1.84	0.66	2.0	ng/l	2.00		92	70-130			J
PFHpA	1.96	0.53	2.0	ng/l	2.00		98	70-130			J
PFHxA	1.97	0.49	2.0	ng/l	2.00		98	70-130			J
PFHxS	2.01	0.59	2.0	ng/l	2.00		100	70-130			
PFNA	2.07	0.52	2.0	ng/l	2.00		104	70-130			
PFOA	2.12	0.67	2.0	ng/l	2.00		106	70-130			
PFOS	2.03	0.53	2.0	ng/l	2.00		101	70-130			
PFTeDA	2.52	0.45	2.0	ng/l	2.00		126	70-130			
PFTTrDA	1.69	0.42	2.0	ng/l	2.00		85	70-130			J
PFUnA	1.97	0.48	2.0	ng/l	2.00		98	70-130			J
<i>Surrogate(s)</i>											
13C2-PFDA	39.2			ng/l	40.0		98	70-130			
13C2-PFHxA	39.4			ng/l	40.0		99	70-130			
d5-EtFOSAA	162			ng/l	160		101	70-130			
HFPO-DA-13C3	38.0			ng/l	40.0		95	70-130			
LCS Dup (W3J1462-BSD1)						Prepared: 10/17/23 Analyzed: 10/19/23					
11CI-PF3OUdS	2.12	0.56	2.0	ng/l	2.00		106	70-130	9	30	
9CI-PF3ONS	2.09	0.53	2.0	ng/l	2.00		105	70-130	2	30	
ADONA	2.13	0.55	2.0	ng/l	2.00		107	70-130	13	30	
EtFOSAA	2.58	0.48	2.0	ng/l	2.00		129	70-130	26	30	
HFPO-DA	2.40	0.87	2.0	ng/l	2.00		120	70-130	13	30	
MeFOSAA	2.50	0.58	2.0	ng/l	2.00		125	70-130	9	30	
PFBS	2.17	0.58	2.0	ng/l	2.00		108	70-130	5	30	
PFDA	1.88	0.45	2.0	ng/l	2.00		94	70-130	0.2	30	J
PFDoA	1.79	0.66	2.0	ng/l	2.00		90	70-130	3	30	J
PFHpA	2.14	0.53	2.0	ng/l	2.00		107	70-130	9	30	
PFHxA	2.28	0.49	2.0	ng/l	2.00		114	70-130	15	30	
PFHxS	2.29	0.59	2.0	ng/l	2.00		114	70-130	13	30	
PFNA	2.23	0.52	2.0	ng/l	2.00		112	70-130	7	30	
PFOA	2.24	0.67	2.0	ng/l	2.00		112	70-130	6	30	
PFOS	2.27	0.53	2.0	ng/l	2.00		113	70-130	11	30	
PFTeDA	2.45	0.45	2.0	ng/l	2.00		122	70-130	3	30	
PFTTrDA	1.81	0.42	2.0	ng/l	2.00		91	70-130	7	30	J
PFUnA	2.03	0.48	2.0	ng/l	2.00		102	70-130	3	30	
<i>Surrogate(s)</i>											
13C2-PFDA	41.7			ng/l	40.0		104	70-130			
13C2-PFHxA	42.7			ng/l	40.0		107	70-130			



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W3J1462 - EPA 537.1 (Continued)											
LCS Dup (W3J1462-BSD1)											
Prepared: 10/17/23 Analyzed: 10/19/23											
<i>Surrogate(s)</i>											
d5-EtFOSAA	179			ng/l	160		112	70-130			
HFPO-DA-13C3	41.3			ng/l	40.0		103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/20/2023 16:14

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3509033**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com invoice to Rose Ford, Rford@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input checked="" type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindle		SAMPLER						Charges will apply for weekends/holidays	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	COMMENTS
	10/4/23	14:50	G	PT-UV20-S10	4			X	X	
				PT-UV20-S10						
	10/4/23	16:00	G	PT-UV15-S10	4			X	X	
		15:25	G	PT-UV14-S10	4			X	X	
		14:20	G	PT-UV18-S10	4			X	X	
		8:50	G	PT-UV7-S10	4			X	X	
		9:10	G	PT-UV8-S10	4			X	X	
		9:10	G	PT-UV8-S10D	4			X	X	
		13:43	G	PT-UV19-S10	4			X	X	
		17:00	G	Field Blank	1				X	

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 2:20	RECEIVED BY <i>[Signature]</i>	SAMPLE CONDITION: Actual Temperature: 4.9 F-0281	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OI = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 4:10	RECEIVED BY <i>[Signature]</i>	Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	<input checked="" type="checkbox"/> Y / <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> Y / <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> Y / <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> Y / <input checked="" type="checkbox"/> N
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



Sample Receipt Checklist

Week WKO: **3109033**

Date/Time Received: **10/05/23 16:14**

WKO Logged by: **Jaime Gomez**

of Samples: **09**

Samples Checked by: **Jaime Gomez**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ice Type (Blue/Wet)				4.9 °C
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Amt added
pH adjusted for O&G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: **10/09/23**

Work Orders: 3J09034

Report Date: 10/22/2023

Project: COSM 97-005

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

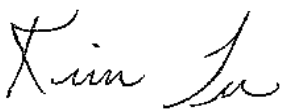
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Certificate of Analysis

FINAL REPORT

Reported:
10/22/2023 13:49

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GS9-S4	Pet-Shin Wu	3J09034-01	Water	10/05/23 08:50	
PT-GS9-S8	Pet-Shin Wu	3J09034-02	Water	10/05/23 08:50	
PT-GS10-S4	Pet-Shin Wu	3J09034-03	Water	10/05/23 13:39	
PT-GS10-S8	Pet-Shin Wu	3J09034-04	Water	10/05/23 13:39	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/22/2023 13:49

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GS9-S4
3J09034-01 (Water) Sampled: 10/05/23 8:50 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1301		Preparation: EPA 200.2		Prepared: 10/16/23 10:15		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/18/23	
Iron, Total	0.089	0.0065	0.030	mg/l	1	10/18/23	
Manganese, Dissolved	4.1	2.7	5.0	ug/l	1	10/18/23	J
Manganese, Total	0.0081	0.00083	0.0050	mg/l	1	10/18/23	

Sample Results

Sample: PT-GS9-S8
3J09034-02 (Water) Sampled: 10/05/23 8:50 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1301		Preparation: EPA 200.2		Prepared: 10/16/23 10:15		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/18/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/18/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/18/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/18/23	

Sample Results

Sample: PT-GS10-S4
3J09034-03 (Water) Sampled: 10/05/23 13:39 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1301		Preparation: EPA 200.2		Prepared: 10/16/23 10:15		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/18/23	
Iron, Total	0.011	0.0065	0.030	mg/l	1	10/18/23	J
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/18/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/18/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/22/2023 13:49

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GS10-S8

Sampled: 10/05/23 13:39 by Pet-Shin Wu

3J09034-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Metals by EPA 200 Series Methods

Method: EPA 200.7

Instr: ICP03

Batch ID: W3J1301

Preparation: EPA 200.2

Prepared: 10/16/23 10:15

Analyst: kvm

Iron, Dissolved	ND	5.0	30	ug/l	1	10/18/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/18/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/18/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/18/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/22/2023 13:49

Project Manager: Brown & Caldwell

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1301 - EPA 200.7											
Blank (W3J1301-BLK1)						Prepared: 10/16/23 Analyzed: 10/18/23					
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W3J1301-BS1)						Prepared: 10/16/23 Analyzed: 10/18/23					
Iron, Dissolved	224	5.0	30	ug/l	200		112	85-115			
Iron, Total	0.224	0.0065	0.030	mg/l	0.200		112	85-115			
Manganese, Dissolved	201	2.7	5.0	ug/l	200		101	85-115			
Manganese, Total	0.201	0.00083	0.0050	mg/l	0.200		101	85-115			
Matrix Spike (W3J1301-MS1)						Source: 3J09034-01 Prepared: 10/16/23 Analyzed: 10/18/23					
Iron, Total	0.316	0.0065	0.030	mg/l	0.200	0.0888	114	70-130			
Manganese, Dissolved	210	2.7	5.0	ug/l	200	4.11	103	70-130			
Manganese, Total	0.210	0.00083	0.0050	mg/l	0.200	0.00814	101	70-130			
Matrix Spike (W3J1301-MS2)						Source: 3J09137-01 Prepared: 10/16/23 Analyzed: 10/18/23					
Iron, Dissolved	252	5.0	30	ug/l	200	ND	126	70-130			
Iron, Total	0.252	0.0065	0.030	mg/l	0.200	0.0297	111	70-130			
Manganese, Dissolved	212	2.7	5.0	ug/l	200	ND	106	70-130			
Manganese, Total	0.212	0.00083	0.0050	mg/l	0.200	0.00955	101	70-130			
Matrix Spike Dup (W3J1301-MSD1)						Source: 3J09034-01 Prepared: 10/16/23 Analyzed: 10/18/23					
Iron, Total	0.308	0.0065	0.030	mg/l	0.200	0.0888	109	70-130	3	30	
Manganese, Dissolved	207	2.7	5.0	ug/l	200	4.11	102	70-130	1	30	
Manganese, Total	0.207	0.00083	0.0050	mg/l	0.200	0.00814	100	70-130	1	30	
Matrix Spike Dup (W3J1301-MSD2)						Source: 3J09137-01 Prepared: 10/16/23 Analyzed: 10/18/23					
Iron, Dissolved	253	5.0	30	ug/l	200	ND	126	70-130	0.3	30	
Iron, Total	0.253	0.0065	0.030	mg/l	0.200	0.0297	112	70-130	0.3	30	
Manganese, Dissolved	213	2.7	5.0	ug/l	200	ND	106	70-130	0.4	30	
Manganese, Total	0.213	0.00083	0.0050	mg/l	0.200	0.00955	102	70-130	0.4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/22/2023 13:49

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **309034**

Page 1 Of 1

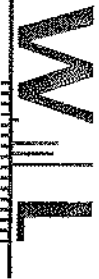
CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		200.7 Fe, Total and Dissolved 200.8 Mn, Total and Dissolved				<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindle		SAMPLER <i>Per Brian W</i>						Charges will apply for weekends/holidays	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved	COMMENTS									
	10/5/23	8:50	GW	PT-GS9-S4	2	✓	✓	Analyze both Fe and Mn by EPA 200.7									
		8:50	GW	PT-GS9-S8	2	✓	✓										
		13:39	GW	PT-GS10-S26	2	✓	✓										
		13:39	GW	PT-GS10-S8	2	✓	✓										

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 2:20	RECEIVED BY <i>[Signature]</i>	SAMPLE CONDITION: Actual Temperature: 4.9 T-0261	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous Sl = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/5/23 4:10	RECEIVED BY <i>[Signature]</i>	Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	Y / N Y / N Y / N Y / N
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **3109034**

Date/Time Received: **10/5/2023 16:14**

WKO Logged by: **Jerald Ancheta**

of Samples: **4**

Samples Checked by: **Jerico Bolotano**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC				
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		4.9°C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# pH Reagent: Acid Lot# Anti added
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cl Test Strip Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reagent: Acid Lot# Anti added
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jerald Ancheta*

Date: **10/9/2023**

Work Orders: 3J09036

Report Date: 10/19/2023

Project: COSM 97-005

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

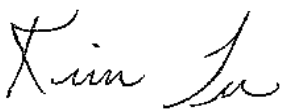
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Certificate of Analysis

FINAL REPORT

Reported:
10/19/2023 18:02

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV19-S10	Client	3J09036-01	Water	10/04/23 13:43	
PT-UV19-S10D	Client	3J09036-02	Water	10/04/23 13:43	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:02

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV19-S10
3J09036-01 (Water) Sampled: 10/04/23 13:43 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0937		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:08		Analyst: mld	
1,4-Dioxane	0.095	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	105%	Conc: 10.5	70-130			10/17/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/12/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/12/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/12/23	
1,1-Dichloroethane	0.36	0.27	0.50	ug/l	1	10/12/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/12/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/12/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/12/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/12/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/12/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/12/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/12/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/12/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/12/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/12/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/12/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/12/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/12/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/12/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/12/23	
Acetone	7.4	3.1	5.0	ug/l	1	10/12/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/12/23	
Benzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/12/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/12/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/12/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV19-S10
3J09036-01 (Water) Sampled: 10/04/23 13:43 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/12/23	
Carbon tetrachloride	0.53	0.27	0.50	ug/l	1	10/12/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/12/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/12/23	
Chloroform	3.2	0.27	0.50	ug/l	1	10/12/23	
Chloromethane	0.64	0.23	0.50	ug/l	1	10/12/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/12/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/12/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/12/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/12/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/12/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/12/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/12/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/12/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/12/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/12/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/12/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/12/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/12/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/12/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/12/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/12/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/12/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/12/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/12/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/12/23	
Styrene	ND	0.19	0.50	ug/l	1	10/12/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/12/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/12/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/12/23	
THMs, Total	3.2		0.50	ug/l	1	10/12/23	
Toluene	ND	0.29	0.50	ug/l	1	10/12/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV19-S10
3J09036-01 (Water) Sampled: 10/04/23 13:43 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2	Instr: GCMS08
Batch ID: W3J1154	Preparation: EPA 5030B
Prepared: 10/12/23 14:51	Analyst: ADM
trans-1,2-Dichloroethene	ND 0.26 0.50 ug/l 1 10/12/23
trans-1,3-Dichloropropene	ND 0.32 0.50 ug/l 1 10/12/23
Trichloroethene	ND 0.18 0.50 ug/l 1 10/12/23
Trichlorofluoromethane	0.20 0.18 0.50 ug/l 1 10/12/23 J
Vinyl chloride	ND 0.18 0.50 ug/l 1 10/12/23
Xylenes, Total	ND 0.33 0.50 ug/l 1 10/12/23

Surrogate(s)

1,2-Dichlorobenzene-d4	87%	Conc: 43.7	70-130	10/12/23
4-Bromofluorobenzene	91%	Conc: 45.4	70-130	10/12/23

Sample Results

(Continued)

Sample: PT-UV19-S10D
3J09036-02 (Water) Sampled: 10/04/23 13:43 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522	Instr: GCMS20
Batch ID: W3J0937	Preparation: EPA 522/SPE
Prepared: 10/11/23 08:08	Analyst: mld
1,4-Dioxane	0.076 0.028 0.070 ug/l 1 10/17/23

Surrogate(s)

1,4-Dioxane-d8	96%	Conc: 9.56	70-130	10/17/23
----------------	-----	------------	--------	----------

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:02

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0937 - EPA 522											
Blank (W3J0937-BLK1)						Prepared: 10/11/23 Analyzed: 10/17/23					
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.25			ug/l	10.0		83	70-130			
LCS (W3J0937-BS1)						Prepared: 10/11/23 Analyzed: 10/17/23					
1,4-Dioxane	1.49	0.028	0.070	ug/l	2.00		74	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.55			ug/l	10.0		76	70-130			
LCS Dup (W3J0937-BSD1)						Prepared: 10/11/23 Analyzed: 10/17/23					
1,4-Dioxane	1.63	0.028	0.070	ug/l	2.00		82	70-130	9	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.08			ug/l	10.0		81	70-130			

Quality Control Results

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2											
Blank (W3J1154-BLK1)						Prepared & Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
Blank (W3J1154-BLK1)					Prepared & Analyzed: 10/12/23						
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
Blank (W3J1154-BLK1)						Prepared & Analyzed: 10/12/23					
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.2			ug/l	50.0		80	70-130			
4-Bromofluorobenzene	42.2			ug/l	50.0		84	70-130			
LCS (W3J1154-BS1)						Prepared & Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.43	0.24	0.50	ug/l	5.00		109	70-130			
1,1,1-Trichloroethane	5.28	0.26	0.50	ug/l	5.00		106	70-130			
1,1,2,2-Tetrachloroethane	5.08	0.20	0.50	ug/l	5.00		102	70-130			
1,1,2-Trichloroethane	5.32	0.19	0.50	ug/l	5.00		106	70-130			
1,1-Dichloroethane	4.55	0.27	0.50	ug/l	5.00		91	70-130			
1,1-Dichloroethene	4.87	0.16	0.50	ug/l	5.00		97	70-130			
1,1-Dichloropropene	5.16	0.14	0.50	ug/l	5.00		103	70-130			
1,2,3-Trichlorobenzene	4.59	0.40	0.50	ug/l	5.00		92	70-130			
1,2,3-Trichloropropane	5.23	0.22	0.50	ug/l	5.00		105	70-130			
1,2,4-Trichlorobenzene	5.02	0.17	0.50	ug/l	5.00		100	70-130			
1,2,4-Trimethylbenzene	5.11	0.20	0.50	ug/l	5.00		102	70-130			
1,2-Dichloroethane	5.13	0.24	0.50	ug/l	5.00		103	70-130			
1,2-Dichloropropane	5.02	0.13	0.50	ug/l	5.00		100	70-130			
1,3,5-Trimethylbenzene	5.06	0.17	0.50	ug/l	5.00		101	70-130			
1,3-Dichloropropane	5.33	0.27	0.50	ug/l	5.00		107	70-130			
2,2-Dichloropropane	4.76	0.17	0.50	ug/l	5.00		95	70-130			
2-Butanone	4.54	1.5	5.0	ug/l	5.00		91	70-130			J
2-Chlorotoluene	4.85	0.15	0.50	ug/l	5.00		97	70-130			
2-Hexanone	4.98	1.2	5.0	ug/l	5.00		100	70-130			J
4-Chlorotoluene	4.76	0.15	0.50	ug/l	5.00		95	70-130			
4-Methyl-2-pentanone	4.87	1.8	5.0	ug/l	5.00		97	70-130			J
Acetone	49.6	3.1	5.0	ug/l	50.0		99	70-130			
Benzene	5.14	0.15	0.50	ug/l	5.00		103	70-130			
Bromobenzene	5.03	0.15	0.50	ug/l	5.00		101	70-130			
Bromochloromethane	4.48	0.15	0.50	ug/l	5.00		90	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
LCS (W3J1154-BS1)					Prepared & Analyzed: 10/12/23						
Bromodichloromethane	5.14	0.24	0.50	ug/l	5.00		103	70-130			
Bromoform	4.97	0.38	0.50	ug/l	5.00		99	70-130			
Bromomethane	4.25	0.27	0.50	ug/l	5.00		85	70-130			
Carbon Disulfide	4.56	0.25	0.50	ug/l	5.00		91	70-130			
Carbon tetrachloride	5.04	0.27	0.50	ug/l	5.00		101	70-130			
Chlorobenzene	5.28	0.15	0.50	ug/l	5.00		106	70-130			
Chloroethane	4.04	0.17	0.50	ug/l	5.00		81	70-130			
Chloroform	4.82	0.27	0.50	ug/l	5.00		96	70-130			
Chloromethane	4.04	0.23	0.50	ug/l	5.00		81	70-130			
cis-1,2-Dichloroethene	4.61	0.25	0.50	ug/l	5.00		92	70-130			
cis-1,3-Dichloropropene	4.79	0.30	0.50	ug/l	5.00		96	70-130			
Dibromochloromethane	5.10	0.20	0.50	ug/l	5.00		102	70-130			
Dibromomethane	5.13	0.20	0.50	ug/l	5.00		103	70-130			
Dichlorodifluoromethane (Freon 12)	4.54	0.45	0.50	ug/l	5.00		91	70-130			
Di-isopropyl ether	20.5	1.1	2.0	ug/l	20.0		102	70-130			
Ethyl tert-butyl ether	19.7	1.0	2.0	ug/l	20.0		99	70-130			
Ethylbenzene	4.89	0.21	0.50	ug/l	5.00		98	70-130			
Freon 113	5.08	1.5	5.0	ug/l	5.00		102	70-130			
Hexachlorobutadiene	4.85	0.40	0.50	ug/l	5.00		97	70-130			
Isopropylbenzene	4.83	0.18	0.50	ug/l	5.00		97	70-130			
m,p-Xylene	4.90	0.33	0.50	ug/l	5.00		98	70-130			
m-Dichlorobenzene	4.88	0.14	0.50	ug/l	5.00		98	70-130			
Methyl tert-butyl ether (MTBE)	19.1	0.94	2.0	ug/l	20.0		96	70-130			
Methylene chloride	4.45	0.30	0.50	ug/l	5.00		89	70-130			
Naphthalene	4.82	0.35	0.50	ug/l	5.00		96	70-130			
n-Butylbenzene	4.89	0.29	0.50	ug/l	5.00		98	70-130			
n-Propylbenzene	5.01	0.18	0.50	ug/l	5.00		100	70-130			
o-Dichlorobenzene	5.27	0.19	0.50	ug/l	5.00		105	70-130			
o-Xylene	5.05	0.20	0.50	ug/l	5.00		101	70-130			
p-Dichlorobenzene	5.27	0.18	0.50	ug/l	5.00		105	70-130			
p-Isopropyltoluene	5.00	0.25	0.50	ug/l	5.00		100	70-130			
sec-Butylbenzene	4.87	0.24	0.50	ug/l	5.00		97	70-130			
Styrene	5.04	0.19	0.50	ug/l	5.00		101	70-130			
Tert-amyl methyl ether	21.6	0.59	2.0	ug/l	20.0		108	70-130			
tert-Butylbenzene	4.80	0.18	0.50	ug/l	5.00		96	70-130			
Tetrachloroethene	4.87	0.18	0.50	ug/l	5.00		97	70-130			
Toluene	5.34	0.29	0.50	ug/l	5.00		107	70-130			
trans-1,2-Dichloroethene	4.59	0.26	0.50	ug/l	5.00		92	70-130			
trans-1,3-Dichloropropene	5.20	0.32	0.50	ug/l	5.00		104	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
LCS (W3J1154-BS1)					Prepared & Analyzed: 10/12/23						
Trichloroethene	4.65	0.18	0.50	ug/l	5.00		93	70-130			
Trichlorofluoromethane	5.46	0.18	0.50	ug/l	5.00		109	70-130			
Vinyl chloride	4.25	0.18	0.50	ug/l	5.00		85	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	49.8			ug/l	50.0		100	70-130			
4-Bromofluorobenzene	48.4			ug/l	50.0		97	70-130			
LCS Dup (W3J1154-BSD1)					Prepared & Analyzed: 10/12/23						
1,1,1,2-Tetrachloroethane	5.30	0.24	0.50	ug/l	5.00		106	70-130	2	30	
1,1,1-Trichloroethane	4.89	0.26	0.50	ug/l	5.00		98	70-130	8	30	
1,1,2,2-Tetrachloroethane	5.28	0.20	0.50	ug/l	5.00		106	70-130	4	30	
1,1,2-Trichloroethane	5.31	0.19	0.50	ug/l	5.00		106	70-130	0.3	30	
1,1-Dichloroethane	4.59	0.27	0.50	ug/l	5.00		92	70-130	0.9	30	
1,1-Dichloroethene	4.99	0.16	0.50	ug/l	5.00		100	70-130	2	30	
1,1-Dichloropropene	4.82	0.14	0.50	ug/l	5.00		96	70-130	7	30	
1,2,3-Trichlorobenzene	4.59	0.40	0.50	ug/l	5.00		92	70-130	0.05	30	
1,2,3-Trichloropropane	5.27	0.22	0.50	ug/l	5.00		105	70-130	0.7	30	
1,2,4-Trichlorobenzene	4.95	0.17	0.50	ug/l	5.00		99	70-130	1	30	
1,2,4-Trimethylbenzene	4.93	0.20	0.50	ug/l	5.00		99	70-130	4	30	
1,2-Dichloroethane	5.14	0.24	0.50	ug/l	5.00		103	70-130	0.2	30	
1,2-Dichloropropane	4.96	0.13	0.50	ug/l	5.00		99	70-130	1	30	
1,3,5-Trimethylbenzene	4.82	0.17	0.50	ug/l	5.00		96	70-130	5	30	
1,3-Dichloropropane	5.23	0.27	0.50	ug/l	5.00		105	70-130	2	30	
2,2-Dichloropropane	4.66	0.17	0.50	ug/l	5.00		93	70-130	2	30	
2-Butanone	4.45	1.5	5.0	ug/l	5.00		89	70-130	2	30	J
2-Chlorotoluene	4.71	0.15	0.50	ug/l	5.00		94	70-130	3	30	
2-Hexanone	5.14	1.2	5.0	ug/l	5.00		103	70-130	3	30	
4-Chlorotoluene	4.51	0.15	0.50	ug/l	5.00		90	70-130	6	30	
4-Methyl-2-pentanone	4.81	1.8	5.0	ug/l	5.00		96	70-130	1	30	J
Acetone	52.0	3.1	5.0	ug/l	50.0		104	70-130	5	30	
Benzene	4.84	0.15	0.50	ug/l	5.00		97	70-130	6	30	
Bromobenzene	4.98	0.15	0.50	ug/l	5.00		100	70-130	0.9	30	
Bromochloromethane	4.41	0.15	0.50	ug/l	5.00		88	70-130	2	30	
Bromodichloromethane	5.11	0.24	0.50	ug/l	5.00		102	70-130	0.6	30	
Bromoform	5.01	0.38	0.50	ug/l	5.00		100	70-130	0.8	30	
Bromomethane	4.21	0.27	0.50	ug/l	5.00		84	70-130	0.8	30	
Carbon Disulfide	4.47	0.25	0.50	ug/l	5.00		89	70-130	2	30	
Carbon tetrachloride	4.89	0.27	0.50	ug/l	5.00		98	70-130	3	30	
Chlorobenzene	5.13	0.15	0.50	ug/l	5.00		103	70-130	3	30	
Chloroethane	4.09	0.17	0.50	ug/l	5.00		82	70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/19/2023 18:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
LCS Dup (W3J1154-BSD1)					Prepared & Analyzed: 10/12/23						
Chloroform	4.47	0.27	0.50	ug/l	5.00		89	70-130	8	30	
Chloromethane	4.18	0.23	0.50	ug/l	5.00		84	70-130	3	30	
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00		91	70-130	1	30	
cis-1,3-Dichloropropene	4.76	0.30	0.50	ug/l	5.00		95	70-130	0.8	30	
Dibromochloromethane	5.05	0.20	0.50	ug/l	5.00		101	70-130	1	30	
Dibromomethane	5.27	0.20	0.50	ug/l	5.00		105	70-130	3	30	
Dichlorodifluoromethane (Freon 12)	4.64	0.45	0.50	ug/l	5.00		93	70-130	2	30	
Di-isopropyl ether	20.3	1.1	2.0	ug/l	20.0		102	70-130	0.9	30	
Ethyl tert-butyl ether	19.8	1.0	2.0	ug/l	20.0		99	70-130	0.4	30	
Ethylbenzene	4.50	0.21	0.50	ug/l	5.00		90	70-130	8	30	
Freon 113	4.95	1.5	5.0	ug/l	5.00		99	70-130	3	30	J
Hexachlorobutadiene	4.71	0.40	0.50	ug/l	5.00		94	70-130	3	30	
Isopropylbenzene	4.53	0.18	0.50	ug/l	5.00		91	70-130	6	30	
m,p-Xylene	4.61	0.33	0.50	ug/l	5.00		92	70-130	6	30	
m-Dichlorobenzene	4.81	0.14	0.50	ug/l	5.00		96	70-130	1	30	
Methyl tert-butyl ether (MTBE)	19.6	0.94	2.0	ug/l	20.0		98	70-130	3	30	
Methylene chloride	4.53	0.30	0.50	ug/l	5.00		91	70-130	2	30	
Naphthalene	4.87	0.35	0.50	ug/l	5.00		97	70-130	1	30	
n-Butylbenzene	4.65	0.29	0.50	ug/l	5.00		93	70-130	5	30	
n-Propylbenzene	4.76	0.18	0.50	ug/l	5.00		95	70-130	5	30	
o-Dichlorobenzene	5.27	0.19	0.50	ug/l	5.00		105	70-130	0.1	30	
o-Xylene	4.83	0.20	0.50	ug/l	5.00		97	70-130	4	30	
p-Dichlorobenzene	5.22	0.18	0.50	ug/l	5.00		104	70-130	1	30	
p-Isopropyltoluene	4.77	0.25	0.50	ug/l	5.00		95	70-130	5	30	
sec-Butylbenzene	4.68	0.24	0.50	ug/l	5.00		94	70-130	4	30	
Styrene	4.82	0.19	0.50	ug/l	5.00		96	70-130	4	30	
Tert-amyl methyl ether	21.3	0.59	2.0	ug/l	20.0		106	70-130	1	30	
tert-Butylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130	5	30	
Tetrachloroethene	4.66	0.18	0.50	ug/l	5.00		93	70-130	5	30	
Toluene	5.10	0.29	0.50	ug/l	5.00		102	70-130	5	30	
trans-1,2-Dichloroethene	4.59	0.26	0.50	ug/l	5.00		92	70-130	0.1	30	
trans-1,3-Dichloropropene	5.08	0.32	0.50	ug/l	5.00		102	70-130	2	30	
Trichloroethene	4.47	0.18	0.50	ug/l	5.00		89	70-130	4	30	
Trichlorofluoromethane	4.34	0.18	0.50	ug/l	5.00		87	70-130	23	30	
Vinyl chloride	4.23	0.18	0.50	ug/l	5.00		85	70-130	0.5	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	51.3			ug/l	50.0		103	70-130			
4-Bromofluorobenzene	49.8			ug/l	50.0		100	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/19/2023 18:02

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Sample Receipt Checklist

Weck WKO: 3109036 Date/Time Received: 10/05/23 16:14
 WKO Logged by: Jaime Gomez # of Samples: 02
 Samples Checked by: Jaime Gomez Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4.9 °C
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, if Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9				
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
O&G pH <2 verified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by: _____ Date: 10/09/23
 Signature: Jaime Gomez

Work Orders: 3J09037

Report Date: 10/23/2023

Project: COSM 97-005

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

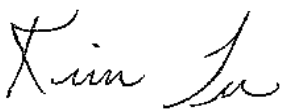
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Certificate of Analysis

FINAL REPORT

Reported:
10/23/2023 16:27

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GS14-S4	Client	3J09037-01	Water	10/04/23 15:25	
PT-GS14-S8	Client	3J09037-02	Water	10/04/23 15:25	
PT-GS15-S4	Client	3J09037-03	Water	10/05/23 16:00	
PT-GS15-S8	Client	3J09037-04	Water	10/05/23 16:00	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/23/2023 16:27

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GS14-S4
3J09037-01 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1223		Preparation: EPA 200.2		Prepared: 10/13/23 10:42		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	0.42	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	4.8	2.7	5.0	ug/l	1	10/20/23	J
Manganese, Total	0.064	0.00083	0.0050	mg/l	1	10/20/23	

Sample Results

Sample: PT-GS14-S8
3J09037-02 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1223		Preparation: EPA 200.2		Prepared: 10/13/23 10:42		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/20/23	
Manganese, Total	0.0021	0.00083	0.0050	mg/l	1	10/20/23	J

Sample Results

Sample: PT-GS15-S4
3J09037-03 (Water) Sampled: 10/05/23 16:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1223		Preparation: EPA 200.2		Prepared: 10/13/23 10:42		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	0.066	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	4.6	2.7	5.0	ug/l	1	10/20/23	J
Manganese, Total	0.016	0.00083	0.0050	mg/l	1	10/20/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 10/23/2023 16:27

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GS15-S8
 3J09037-04 (Water) Sampled: 10/05/23 16:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7				Instr: ICP03			
Batch ID: W3J1223		Preparation: EPA 200.2		Prepared: 10/13/23 10:42		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/20/23	
Manganese, Total	0.0017	0.00083	0.0050	mg/l	1	10/20/23	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/23/2023 16:27

Project Manager: Brown & Caldwell

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J1223 - EPA 200.7											
Blank (W3J1223-BLK1)						Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W3J1223-BS1)						Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	210	5.0	30	ug/l	200		105	85-115			
Iron, Total	0.210	0.0065	0.030	mg/l	0.200		105	85-115			
Manganese, Dissolved	194	2.7	5.0	ug/l	200		97	85-115			
Manganese, Total	0.194	0.00083	0.0050	mg/l	0.200		97	85-115			
Matrix Spike (W3J1223-MS1)						Source: 3J09037-02 Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	211	5.0	30	ug/l	200	ND	106	70-130			
Iron, Total	0.211	0.0065	0.030	mg/l	0.200	ND	106	70-130			
Manganese, Dissolved	196	2.7	5.0	ug/l	200	ND	98	70-130			
Manganese, Total	0.196	0.00083	0.0050	mg/l	0.200	0.00212	97	70-130			
Matrix Spike (W3J1223-MS2)						Source: 3J09040-11 Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	346	5.0	30	ug/l	200	ND	173	70-130			
Iron, Total	0.346	0.0065	0.030	mg/l	0.200	0.122	112	70-130			
Manganese, Dissolved	211	2.7	5.0	ug/l	200	4.42	103	70-130			
Manganese, Total	0.211	0.00083	0.0050	mg/l	0.200	0.0163	97	70-130			
Matrix Spike Dup (W3J1223-MSD1)						Source: 3J09037-02 Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	214	5.0	30	ug/l	200	ND	107	70-130	1	30	
Iron, Total	0.214	0.0065	0.030	mg/l	0.200	ND	107	70-130	1	30	
Manganese, Dissolved	200	2.7	5.0	ug/l	200	ND	100	70-130	2	30	
Manganese, Total	0.200	0.00083	0.0050	mg/l	0.200	0.00212	99	70-130	2	30	
Matrix Spike Dup (W3J1223-MSD2)						Source: 3J09040-11 Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	344	5.0	30	ug/l	200	ND	172	70-130	0.5	30	
Iron, Total	0.344	0.0065	0.030	mg/l	0.200	0.122	111	70-130	0.5	30	
Manganese, Dissolved	211	2.7	5.0	ug/l	200	4.42	104	70-130	0.1	30	
Manganese, Total	0.211	0.00083	0.0050	mg/l	0.200	0.0163	98	70-130	0.1	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/23/2023 16:27

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 • Fax 626-336-2634 • www.wecklabs.com

Work Order # **3J09037**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com						<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindie		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com						Charges will apply for weekends/holidays	

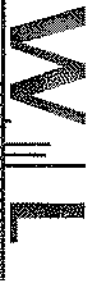
ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPL. TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved	COMMENTS										
	10/4/23	15:25	GW	PT-GS14-S4	2	✓	✓	Analyze both Fe and Mn by EPA 200.7										
		15:25	GW	PT-GS14-S8	2	✓	✓											
		16:00	GW	PT-GS15-S4	2	✓	✓											
		16:00	GW	PT-GS15-S8	2	✓	✓											

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 2:25 10/5/23	RECEIVED BY <i>[Signature]</i>	SAMPLE CONDITION: Actual Temperature: 4.0 T-0261 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 4:10 10/5/23	RECEIVED BY <i>[Signature]</i>		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **3J09037**

Date/Time Received: 10/5/2023 16:14

WKO Logged by: Jerald Ancheta

of Samples: 4

Samples Checked by: Jerico Bolotano

Delivered by: RMS

Task	Yes	No	N/A	Comments
------	-----	----	-----	----------

COC

COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Receipt Information

Sample Temperature	<input checked="" type="checkbox"/>	4.9°C	<input type="checkbox"/>	
Samples received on ice?	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Ice Type (Blue/Wet)		Wet		
All samples intact?	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Samples in proper containers?	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Sufficient sample volume?	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Samples intact?	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Received within holding time?	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Sample Preservation Verification?

Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> pH paper Lot#
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> CI Test Strip Lot#
ORG pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> pH paper Lot#
pH adjusted for ORG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Amt. added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerald Ancheta

Date: 10/9/2023

Work Orders: 3J09039

Report Date: 11/20/2023

Project: COSM 97-005

Received Date: 10/5/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GAC18-S11	Client	3J09039-01	Water	10/04/23 15:20	
PT-GAC8-S11	Client	3J09039-02	Water	10/04/23 10:10	
PT-GAC19-S11	Client	3J09039-03	Water	10/04/23 14:43	
PT-GAC8-S11D	Client	3J09039-04	Water	10/04/23 10:10	
PT-GAC8-S23	Client	3J09039-05	Water	10/04/23 09:45	
PT-GAC7-S23	Client	3J09039-06	Water	10/04/23 09:25	
PT-GAC18-S23	Client	3J09039-07	Water	10/04/23 14:55	
PT-GAC19-S23	Client	3J09039-08	Water	10/04/23 14:18	
PT-GAC8-S23D	Client	3J09039-09	Water	10/04/23 09:45	
PT-GAC7-S11	Client	3J09039-10	Water	10/04/23 09:50	
PT-GAC15-S23T	Client	3J09039-11	Water	10/04/23 16:50	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFUnA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GAC18-S11
3J09039-01 (Water) Sampled: 10/04/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0937 **Prepared:** 10/11/23 08:08
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	123%	Conc: 12.2	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0921 **Prepared:** 10/11/23 07:43
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1462 **Prepared:** 10/17/23 13:52
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/19/23	
ADONA	ND	0.48	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.76	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/19/23	
PFBS	ND	0.50	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.52	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	ND	0.58	1.7	ng/l	1	10/19/23	
PFOS	ND	0.46	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	111%	Conc: 38.6	70-130			10/19/23	
13C2-PFHxA	106%	Conc: 37.0	70-130			10/19/23	
d5-EtFOSAA	120%	Conc: 167	70-130			10/19/23	
HFPO-DA-13C3	112%	Conc: 39.0	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1154 **Prepared:** 10/12/23 14:51
Preparation: EPA 5030B **Analyst:** ADM

3J09039

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC18-S11
3J09039-01 (Water) Sampled: 10/04/23 15:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/13/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/13/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/13/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/13/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/13/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/13/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/13/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/13/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/13/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/13/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/13/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/13/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/13/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/13/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/13/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/13/23	
Acetone	4.4	3.1	5.0	ug/l	1	10/13/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/13/23	
Benzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/13/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/13/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/13/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/13/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/13/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/13/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/13/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC18-S11
3J09039-01 (Water) Sampled: 10/04/23 15:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	10/13/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/13/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/13/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/13/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/13/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/13/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/13/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/13/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/13/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/13/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/13/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/13/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/13/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/13/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/13/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/13/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/13/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/13/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/13/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/13/23	
Styrene	ND	0.19	0.50	ug/l	1	10/13/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/13/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
THMs, Total	ND		0.50	ug/l	1	10/13/23	
Toluene	ND	0.29	0.50	ug/l	1	10/13/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/13/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/13/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/13/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC18-S11
 3J09039-01 (Water) Sampled: 10/04/23 15:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/13/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	87%	Conc: 43.5	70-130			10/13/23	
4-Bromofluorobenzene	89%	Conc: 44.5	70-130			10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S11
3J09039-02 (Water) Sampled: 10/04/23 10:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0937 **Prepared:** 10/11/23 08:08
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	102%	Conc: 9.77	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0922 **Prepared:** 10/11/23 07:44
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1462 **Prepared:** 10/17/23 13:52
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/19/23	
ADONA	ND	0.48	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/19/23	
HFPO-DA	1.8	0.76	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/19/23	
PFBS	ND	0.50	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.52	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	ND	0.58	1.7	ng/l	1	10/19/23	
PFOS	ND	0.46	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	107%	Conc: 37.3	70-130			10/19/23	
13C2-PFHxA	103%	Conc: 35.7	70-130			10/19/23	
d5-EtFOSAA	117%	Conc: 163	70-130			10/19/23	
HFPO-DA-13C3	107%	Conc: 37.1	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1154 **Prepared:** 10/12/23 14:51
Preparation: EPA 5030B **Analyst:** ADM

3J09039

Page 7 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S11
3J09039-02 (Water) Sampled: 10/04/23 10:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/13/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/13/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/13/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/13/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/13/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/13/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/13/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/13/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/13/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/13/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/13/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/13/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/13/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/13/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/13/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/13/23	
Acetone	ND	3.1	5.0	ug/l	1	10/13/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/13/23	
Benzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/13/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/13/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/13/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/13/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/13/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/13/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/13/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S11
3J09039-02 (Water) Sampled: 10/04/23 10:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Chloromethane	0.64	0.23	0.50	ug/l	1	10/13/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/13/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/13/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/13/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/13/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/13/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/13/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/13/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/13/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/13/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/13/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/13/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/13/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/13/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/13/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/13/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/13/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/13/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/13/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/13/23	
Styrene	ND	0.19	0.50	ug/l	1	10/13/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/13/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
THMs, Total	ND		0.50	ug/l	1	10/13/23	
Toluene	ND	0.29	0.50	ug/l	1	10/13/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/13/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/13/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/13/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC8-S11
 3J09039-02 (Water) Sampled: 10/04/23 10:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/13/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.7	70-130			10/13/23	
4-Bromofluorobenzene	89%	Conc: 44.5	70-130			10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC19-S11
3J09039-03 (Water) Sampled: 10/04/23 14:43 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0937

Preparation: EPA 522/SPE

Prepared: 10/11/23 08:08

Analyst: mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	98%	Conc: 9.65	70-130			10/17/23	
----------------	-----	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W3J0922

Preparation: EPA 5030B

Prepared: 10/11/23 07:44

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1462

Preparation: EPA 537/SPE

Prepared: 10/17/23 13:52

Analyst: jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	10/19/23	
ADONA	ND	0.46	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.72	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.48	1.7	ng/l	1	10/19/23	
PFBS	ND	0.48	1.7	ng/l	1	10/19/23	
PFDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.54	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.44	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.40	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.49	1.7	ng/l	1	10/19/23	
PFNA	ND	0.43	1.7	ng/l	1	10/19/23	
PFOA	ND	0.55	1.7	ng/l	1	10/19/23	
PFOS	ND	0.44	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	106%	Conc: 35.3	70-130			10/19/23	
13C2-PFHxA	105%	Conc: 35.0	70-130			10/19/23	
d5-EtFOSAA	112%	Conc: 149	70-130			10/19/23	
HFPO-DA-13C3	107%	Conc: 35.6	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

3J09039

Page 11 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC19-S11
3J09039-03 (Water) Sampled: 10/04/23 14:43 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/13/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/13/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/13/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/13/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/13/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/13/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/13/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/13/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/13/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/13/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/13/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/13/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/13/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/13/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/13/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/13/23	
Acetone	ND	3.1	5.0	ug/l	1	10/13/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/13/23	
Benzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/13/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/13/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/13/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/13/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/13/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/13/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/13/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC19-S11
3J09039-03 (Water) Sampled: 10/04/23 14:43 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Chloromethane	0.83	0.23	0.50	ug/l	1	10/13/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/13/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/13/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/13/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/13/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/13/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/13/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/13/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/13/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/13/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/13/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/13/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/13/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/13/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/13/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/13/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/13/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/13/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/13/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/13/23	
Styrene	ND	0.19	0.50	ug/l	1	10/13/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/13/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
THMs, Total	ND		0.50	ug/l	1	10/13/23	
Toluene	ND	0.29	0.50	ug/l	1	10/13/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/13/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/13/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/13/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC19-S11
 3J09039-03 (Water) Sampled: 10/04/23 14:43 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1154 **Preparation:** EPA 5030B **Prepared:** 10/12/23 14:51
Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/13/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 44.2	70-130			10/13/23	
4-Bromofluorobenzene	92%	Conc: 46.0	70-130			10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S11D
3J09039-04 (Water) Sampled: 10/04/23 10:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0936 **Prepared:** 10/11/23 08:06
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	105%	Conc: 10.5	70-130			10/17/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0922 **Prepared:** 10/11/23 07:44
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1462 **Prepared:** 10/17/23 13:52
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/19/23	
ADONA	ND	0.47	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.73	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.49	1.7	ng/l	1	10/19/23	
PFBS	ND	0.49	1.7	ng/l	1	10/19/23	
PFDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/19/23	
PFNA	ND	0.44	1.7	ng/l	1	10/19/23	
PFOA	ND	0.56	1.7	ng/l	1	10/19/23	
PFOS	ND	0.45	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/19/23	
<i>Surrogate(s)</i>							
13C2-PFDA	107%	Conc: 36.3	70-130			10/19/23	
13C2-PFHxA	107%	Conc: 36.2	70-130			10/19/23	
d5-EtFOSAA	114%	Conc: 154	70-130			10/19/23	
HFPO-DA-13C3	111%	Conc: 37.6	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1154 **Prepared:** 10/12/23 14:51
Preparation: EPA 5030B **Analyst:** ADM

3J09039

Page 15 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S11D
3J09039-04 (Water) Sampled: 10/04/23 10:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/13/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/13/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/13/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/13/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/13/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/13/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/13/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/13/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/13/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/13/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/13/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/13/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/13/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/13/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/13/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/13/23	
Acetone	ND	3.1	5.0	ug/l	1	10/13/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/13/23	
Benzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/13/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/13/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/13/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/13/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/13/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/13/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/13/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S11D
3J09039-04 (Water) Sampled: 10/04/23 10:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51		Analyst: ADM	
Chloromethane	0.28	0.23	0.50	ug/l	1	10/13/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/13/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/13/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/13/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/13/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/13/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/13/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/13/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/13/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/13/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/13/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/13/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/13/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/13/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/13/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/13/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/13/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/13/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/13/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/13/23	
Styrene	ND	0.19	0.50	ug/l	1	10/13/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/13/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
THMs, Total	ND		0.50	ug/l	1	10/13/23	
Toluene	ND	0.29	0.50	ug/l	1	10/13/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/13/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/13/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/13/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC8-S11D
 3J09039-04 (Water) Sampled: 10/04/23 10:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/13/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.5	70-130			10/13/23	
4-Bromofluorobenzene	90%	Conc: 45.0	70-130			10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S23
3J09039-05 (Water) Sampled: 10/04/23 9:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0936 **Prepared:** 10/11/23 08:06
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	107%	Conc: 10.3	70-130			10/17/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0922 **Prepared:** 10/11/23 07:44
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1462 **Prepared:** 10/17/23 13:52
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/19/23	
ADONA	ND	0.49	1.8	ng/l	1	10/19/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/19/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/19/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/19/23	
PFBS	ND	0.51	1.8	ng/l	1	10/19/23	
PFDA	ND	0.40	1.8	ng/l	1	10/19/23	
PFDaA	ND	0.58	1.8	ng/l	1	10/19/23	
PFHpA	ND	0.47	1.8	ng/l	1	10/19/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/19/23	
PFHxS	ND	0.52	1.8	ng/l	1	10/19/23	
PFNA	ND	0.46	1.8	ng/l	1	10/19/23	
PFOA	ND	0.59	1.8	ng/l	1	10/19/23	
PFOS	ND	0.47	1.8	ng/l	1	10/19/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/19/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/19/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/19/23	
<i>Surrogate(s)</i>							
13C2-PFDA	106%	Conc: 37.5	70-130			10/19/23	
13C2-PFHxA	105%	Conc: 37.1	70-130			10/19/23	
d5-EtFOSAA	116%	Conc: 164	70-130			10/19/23	
HFPO-DA-13C3	110%	Conc: 38.9	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1154 **Prepared:** 10/12/23 14:51
Preparation: EPA 5030B **Analyst:** ADM

3J09039

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S23
3J09039-05 (Water) Sampled: 10/04/23 9:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1154		Preparation: EPA 5030B		Prepared: 10/12/23 14:51			Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/13/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/13/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/13/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/13/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/13/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/13/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/13/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/13/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/13/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/13/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/13/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/13/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/13/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/13/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/13/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/13/23	
Acetone	4.1	3.1	5.0	ug/l	1	10/13/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/13/23	
Benzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/13/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/13/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/13/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/13/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/13/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/13/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/13/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S23
3J09039-05 (Water) Sampled: 10/04/23 9:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	10/13/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/13/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/13/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/13/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/13/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/13/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/13/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/13/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/13/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/13/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/13/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/13/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/13/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/13/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/13/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/13/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/13/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/13/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/13/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/13/23	
Styrene	ND	0.19	0.50	ug/l	1	10/13/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/13/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
THMs, Total	ND		0.50	ug/l	1	10/13/23	
Toluene	ND	0.29	0.50	ug/l	1	10/13/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/13/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/13/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/13/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC8-S23
 3J09039-05 (Water) Sampled: 10/04/23 9:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/13/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	82%	Conc: 41.1	70-130			10/13/23	
4-Bromofluorobenzene	89%	Conc: 44.7	70-130			10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC7-S23
3J09039-06 (Water) Sampled: 10/04/23 9:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0936 **Prepared:** 10/11/23 08:06
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	113%	Conc: 10.6	70-130			10/17/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0922 **Prepared:** 10/11/23 07:44
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1462 **Prepared:** 10/17/23 13:52
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/19/23	
ADONA	ND	0.46	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.73	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.48	1.7	ng/l	1	10/19/23	
PFBS	ND	0.49	1.7	ng/l	1	10/19/23	
PFDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/19/23	
PFNA	ND	0.44	1.7	ng/l	1	10/19/23	
PFOA	ND	0.56	1.7	ng/l	1	10/19/23	
PFOS	ND	0.45	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/19/23	
<i>Surrogate(s)</i>							
13C2-PFDA	104%	Conc: 35.0	70-130			10/19/23	
13C2-PFHxA	104%	Conc: 34.9	70-130			10/19/23	
d5-EtFOSAA	112%	Conc: 150	70-130			10/19/23	
HFPO-DA-13C3	107%	Conc: 36.1	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1154 **Prepared:** 10/12/23 14:51
Preparation: EPA 5030B **Analyst:** ADM

3J09039

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC7-S23
3J09039-06 (Water) Sampled: 10/04/23 9:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/13/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/13/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/13/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/13/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/13/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/13/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/13/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/13/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/13/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/13/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/13/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/13/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/13/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/13/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/13/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/13/23	
Acetone	ND	3.1	5.0	ug/l	1	10/13/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/13/23	
Benzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/13/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/13/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/13/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/13/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/13/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/13/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/13/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC7-S23
3J09039-06 (Water) Sampled: 10/04/23 9:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Chloromethane	0.29	0.23	0.50	ug/l	1	10/13/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/13/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/13/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/13/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/13/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/13/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/13/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/13/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/13/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/13/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/13/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/13/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/13/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/13/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/13/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/13/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/13/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/13/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/13/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/13/23	
Styrene	ND	0.19	0.50	ug/l	1	10/13/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/13/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
THMs, Total	ND		0.50	ug/l	1	10/13/23	
Toluene	ND	0.29	0.50	ug/l	1	10/13/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/13/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/13/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/13/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC7-S23
 3J09039-06 (Water) Sampled: 10/04/23 9:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1154 **Prepared:** 10/12/23 14:51
Preparation: EPA 5030B **Analyst:** ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/13/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.7	70-130			10/13/23	
4-Bromofluorobenzene	91%	Conc: 45.3	70-130			10/13/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC18-S23
 3J09039-07 (Water) Sampled: 10/04/23 14:55 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0936 **Prepared:** 10/11/23 08:06
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	107%	Conc: 10.3	70-130			10/17/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0922 **Prepared:** 10/11/23 07:44
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1462 **Prepared:** 10/17/23 13:52
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.45	1.6	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.43	1.6	ng/l	1	10/19/23	
ADONA	ND	0.44	1.6	ng/l	1	10/19/23	
EtFOSAA	ND	0.39	1.6	ng/l	1	10/19/23	
HFPO-DA	ND	0.70	1.6	ng/l	1	10/19/23	
MeFOSAA	ND	0.46	1.6	ng/l	1	10/19/23	
PFBS	ND	0.47	1.6	ng/l	1	10/19/23	
PFDA	ND	0.36	1.6	ng/l	1	10/19/23	
PFDaA	ND	0.53	1.6	ng/l	1	10/19/23	
PFHpA	ND	0.43	1.6	ng/l	1	10/19/23	
PFHxA	ND	0.39	1.6	ng/l	1	10/19/23	
PFHxS	ND	0.48	1.6	ng/l	1	10/19/23	
PFNA	ND	0.42	1.6	ng/l	1	10/19/23	
PFOA	ND	0.54	1.6	ng/l	1	10/19/23	
PFOS	ND	0.43	1.6	ng/l	1	10/19/23	
PFTeDA	ND	0.36	1.6	ng/l	1	10/19/23	
PFTTrDA	ND	0.34	1.6	ng/l	1	10/19/23	
PFUnA	ND	0.38	1.6	ng/l	1	10/19/23	
<i>Surrogate(s)</i>							
13C2-PFDA	101%	Conc: 32.7	70-130			10/19/23	
13C2-PFHxA	103%	Conc: 33.3	70-130			10/19/23	
d5-EtFOSAA	111%	Conc: 144	70-130			10/19/23	
HFPO-DA-13C3	106%	Conc: 34.3	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1154 **Prepared:** 10/12/23 14:51
Preparation: EPA 5030B **Analyst:** ADM

3J09039

Page 27 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC18-S23
3J09039-07 (Water) Sampled: 10/04/23 14:55 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/13/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/13/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/13/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/13/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/13/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/13/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/13/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/13/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/13/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/13/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/13/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/13/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/13/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/13/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/13/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/13/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/13/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/13/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/13/23	
Acetone	ND	3.1	5.0	ug/l	1	10/13/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/13/23	
Benzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/13/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/13/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/13/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/13/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/13/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/13/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/13/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/13/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC18-S23
3J09039-07 (Water) Sampled: 10/04/23 14:55 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Chloromethane	0.39	0.23	0.50	ug/l	1	10/13/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/13/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/13/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/13/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/13/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/13/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/13/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/13/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/13/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/13/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/13/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/13/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/13/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/13/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/13/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/13/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/13/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/13/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/13/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/13/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/13/23	
Styrene	ND	0.19	0.50	ug/l	1	10/13/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/13/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/13/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
THMs, Total	ND		0.50	ug/l	1	10/13/23	
Toluene	ND	0.29	0.50	ug/l	1	10/13/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/13/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/13/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/13/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/13/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/13/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC18-S23
 3J09039-07 (Water) Sampled: 10/04/23 14:55 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1154

Preparation: EPA 5030B

Prepared: 10/12/23 14:51

Analyst: ADM

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/13/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	86%	Conc: 42.9	70-130			10/13/23	
4-Bromofluorobenzene	92%	Conc: 45.9	70-130			10/13/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC19-S23
3J09039-08 (Water) Sampled: 10/04/23 14:18 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0936

Preparation: EPA 522/SPE

Prepared: 10/11/23 08:06

Analyst: mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	103%	Conc: 9.81	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W3J0922

Preparation: EPA 5030B

Prepared: 10/11/23 07:44

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1462

Preparation: EPA 537/SPE

Prepared: 10/17/23 13:52

Analyst: jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/19/23	
ADONA	ND	0.48	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.76	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/19/23	
PFBS	ND	0.50	1.7	ng/l	1	10/19/23	
PFDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.52	1.7	ng/l	1	10/19/23	
PFNA	ND	0.45	1.7	ng/l	1	10/19/23	
PFOA	ND	0.58	1.7	ng/l	1	10/19/23	
PFOS	ND	0.46	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/19/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	100%	Conc: 34.8	70-130			10/19/23	
13C2-PFHxA	97%	Conc: 33.6	70-130			10/19/23	
d5-EtFOSAA	109%	Conc: 151	70-130			10/19/23	
HFPO-DA-13C3	100%	Conc: 34.6	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

3J09039

Page 31 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC19-S23
3J09039-08 (Water) Sampled: 10/04/23 14:18 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	3.6	3.1	5.0	ug/l	1	10/15/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC19-S23
3J09039-08 (Water) Sampled: 10/04/23 14:18 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Chloromethane	ND	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC19-S23
 3J09039-08 (Water) Sampled: 10/04/23 14:18 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1179 **Prepared:** 10/13/23 07:48
Preparation: EPA 5030B **Analyst:** adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	86%	Conc: 42.8	70-130			10/15/23	
4-Bromofluorobenzene	87%	Conc: 43.6	70-130			10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S23D
3J09039-09 (Water) Sampled: 10/04/23 9:45 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0936 **Preparation:** EPA 522/SPE **Prepared:** 10/11/23 08:06 **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	107%	Conc: 10.2	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12

Batch ID: W3J0922 **Preparation:** EPA 5030B **Prepared:** 10/11/23 07:44 **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06

Batch ID: W3J1462 **Preparation:** EPA 537/SPE **Prepared:** 10/17/23 13:52 **Analyst:** jna

11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	10/19/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/19/23	
ADONA	ND	0.47	1.7	ng/l	1	10/19/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/19/23	
HFPO-DA	ND	0.74	1.7	ng/l	1	10/19/23	
MeFOSAA	ND	0.49	1.7	ng/l	1	10/19/23	
PFBS	ND	0.49	1.7	ng/l	1	10/19/23	
PFDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFDaA	ND	0.56	1.7	ng/l	1	10/19/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/19/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/19/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/19/23	
PFNA	ND	0.44	1.7	ng/l	1	10/19/23	
PFOA	ND	0.57	1.7	ng/l	1	10/19/23	
PFOS	ND	0.45	1.7	ng/l	1	10/19/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/19/23	
PFTrDA	ND	0.35	1.7	ng/l	1	10/19/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/19/23	

Surrogate(s)

13C2-PFDA	108%	Conc: 36.8	70-130			10/19/23	
13C2-PFHxA	110%	Conc: 37.4	70-130			10/19/23	
d5-EtFOSAA	112%	Conc: 153	70-130			10/19/23	
HFPO-DA-13C3	113%	Conc: 38.4	70-130			10/19/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1179 **Preparation:** EPA 5030B **Prepared:** 10/13/23 07:48 **Analyst:** adm

3J09039

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S23D
3J09039-09 (Water) Sampled: 10/04/23 9:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	ND	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC8-S23D
3J09039-09 (Water) Sampled: 10/04/23 9:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

Chloromethane	0.37	0.23	0.50	ug/l	1	10/15/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC8-S23D
 3J09039-09 (Water) Sampled: 10/04/23 9:45 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 43.8	70-130			10/15/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	87%	Conc: 43.6	70-130			10/15/23	
----------------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC7-S11
3J09039-10 (Water) Sampled: 10/04/23 9:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0936 **Prepared:** 10/11/23 08:06
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/17/23	
-------------	----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	115%	Conc: 11.0	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0922 **Prepared:** 10/11/23 07:44
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1570 **Prepared:** 10/18/23 10:18
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/24/23	
ADONA	ND	0.49	1.8	ng/l	1	10/24/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/24/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/24/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/24/23	
PFBS	ND	0.51	1.8	ng/l	1	10/24/23	
PFDA	ND	0.40	1.8	ng/l	1	10/24/23	
PFDaA	ND	0.58	1.8	ng/l	1	10/24/23	
PFHpA	ND	0.48	1.8	ng/l	1	10/24/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/24/23	
PFHxS	ND	0.53	1.8	ng/l	1	10/24/23	
PFNA	ND	0.46	1.8	ng/l	1	10/24/23	
PFOA	ND	0.59	1.8	ng/l	1	10/24/23	
PFOS	ND	0.47	1.8	ng/l	1	10/24/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/24/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/24/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/24/23	

Surrogate(s)

13C2-PFDA	103%	Conc: 36.7	70-130			10/24/23	
13C2-PFHxA	102%	Conc: 36.4	70-130			10/24/23	
d5-EtFOSAA	108%	Conc: 154	70-130			10/24/23	
HFPO-DA-13C3	101%	Conc: 36.1	70-130			10/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1179 **Prepared:** 10/13/23 07:48
Preparation: EPA 5030B **Analyst:** adm

3J09039

Page 39 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC7-S11
3J09039-10 (Water) Sampled: 10/04/23 9:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	6.3	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC7-S11
3J09039-10 (Water) Sampled: 10/04/23 9:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48			Analyst: adm
Chloromethane	0.27	0.23	0.50	ug/l	1	10/15/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC7-S11
 3J09039-10 (Water) Sampled: 10/04/23 9:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1179 **Prepared:** 10/13/23 07:48
Preparation: EPA 5030B **Analyst:** adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	86%	Conc: 43.1	70-130			10/15/23	
4-Bromofluorobenzene	88%	Conc: 43.8	70-130			10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC15-S23T
3J09039-11 (Water) Sampled: 10/04/23 16:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J0936 **Prepared:** 10/11/23 08:06
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	0.053	0.028	0.070	ug/l	1	10/17/23	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	114%	Conc: 11.1	70-130			10/17/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0922 **Prepared:** 10/11/23 07:44
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/12/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1570 **Prepared:** 10/18/23 10:18
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/24/23	
ADONA	ND	0.49	1.8	ng/l	1	10/24/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/24/23	
HFPO-DA	ND	0.78	1.8	ng/l	1	10/24/23	
MeFOSAA	ND	0.52	1.8	ng/l	1	10/24/23	
PFBS	ND	0.52	1.8	ng/l	1	10/24/23	
PFDA	ND	0.41	1.8	ng/l	1	10/24/23	
PFDaA	ND	0.59	1.8	ng/l	1	10/24/23	
PFHpA	ND	0.48	1.8	ng/l	1	10/24/23	
PFHxA	ND	0.44	1.8	ng/l	1	10/24/23	
PFHxS	ND	0.53	1.8	ng/l	1	10/24/23	
PFNA	ND	0.47	1.8	ng/l	1	10/24/23	
PFOA	ND	0.60	1.8	ng/l	1	10/24/23	
PFOS	ND	0.48	1.8	ng/l	1	10/24/23	
PFTeDA	ND	0.41	1.8	ng/l	1	10/24/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/24/23	
PFUnA	ND	0.43	1.8	ng/l	1	10/24/23	
<i>Surrogate(s)</i>							
13C2-PFDA	100%	Conc: 35.8	70-130			10/24/23	
13C2-PFHxA	103%	Conc: 36.8	70-130			10/24/23	
d5-EtFOSAA	111%	Conc: 160	70-130			10/24/23	
HFPO-DA-13C3	103%	Conc: 36.9	70-130			10/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1179 **Prepared:** 10/13/23 07:48
Preparation: EPA 5030B **Analyst:** adm

3J09039

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC15-S23T
3J09039-11 (Water)

Sampled: 10/04/23 16:50 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2							
Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	ND	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC15-S23T
3J09039-11 (Water)

Sampled: 10/04/23 16:50 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2							
Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Chloromethane	0.50	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC15-S23T
 3J09039-11 (Water) Sampled: 10/04/23 16:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	90%	Conc: 45.0	70-130			10/15/23	
4-Bromofluorobenzene	90%	Conc: 44.8	70-130			10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0936 - EPA 522											
Blank (W3J0936-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
Prepared: 10/11/23 Analyzed: 10/17/23											
Surrogate(s)											
1,4-Dioxane-d8	9.58			ug/l	10.0		96	70-130			
LCS (W3J0936-BS1)											
1,4-Dioxane	0.289	0.028	0.070	ug/l	0.400		72	70-130			
Prepared: 10/11/23 Analyzed: 10/17/23											
Surrogate(s)											
1,4-Dioxane-d8	8.69			ug/l	10.0		87	70-130			
LCS Dup (W3J0936-BSD1)											
1,4-Dioxane	0.307	0.028	0.070	ug/l	0.400		77	70-130	6	30	
Prepared: 10/11/23 Analyzed: 10/17/23											
Surrogate(s)											
1,4-Dioxane-d8	8.82			ug/l	10.0		88	70-130			
Batch: W3J0937 - EPA 522											
Blank (W3J0937-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
Prepared: 10/11/23 Analyzed: 10/17/23											
Surrogate(s)											
1,4-Dioxane-d8	8.25			ug/l	10.0		83	70-130			
LCS (W3J0937-BS1)											
1,4-Dioxane	1.49	0.028	0.070	ug/l	2.00		74	70-130			
Prepared: 10/11/23 Analyzed: 10/17/23											
Surrogate(s)											
1,4-Dioxane-d8	7.55			ug/l	10.0		76	70-130			
LCS Dup (W3J0937-BSD1)											
1,4-Dioxane	1.63	0.028	0.070	ug/l	2.00		82	70-130	9	30	
Prepared: 10/11/23 Analyzed: 10/17/23											
Surrogate(s)											
1,4-Dioxane-d8	8.08			ug/l	10.0		81	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0921 - SRL 524M-TCP											
Blank (W3J0921-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared: 10/11/23 Analyzed: 10/12/23						
LCS (W3J0921-BS1)											
1,2,3-Trichloropropane	0.0202	0.0012	0.0050	ug/l	0.0200		101	80-120			
					Prepared: 10/11/23 Analyzed: 10/12/23						
LCS Dup (W3J0921-BSD1)											
1,2,3-Trichloropropane	0.0200	0.0012	0.0050	ug/l	0.0200		100	80-120	1	20	
					Prepared: 10/11/23 Analyzed: 10/12/23						
Duplicate (W3J0921-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
					Source: 3J09031-06 Prepared: 10/11/23 Analyzed: 10/12/23						
Batch: W3J0922 - SRL 524M-TCP											
Blank (W3J0922-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared: 10/11/23 Analyzed: 10/12/23						
LCS (W3J0922-BS1)											
1,2,3-Trichloropropane	0.0201	0.0012	0.0050	ug/l	0.0200		100	80-120			
					Prepared: 10/11/23 Analyzed: 10/12/23						
LCS Dup (W3J0922-BSD1)											
1,2,3-Trichloropropane	0.0199	0.0012	0.0050	ug/l	0.0200		99	80-120	0.8	20	
					Prepared: 10/11/23 Analyzed: 10/12/23						
Duplicate (W3J0922-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
					Source: 3J09039-02 Prepared: 10/11/23 Analyzed: 10/12/23						

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1462 - EPA 537.1											
Blank (W3J1462-BLK1)						Prepared: 10/17/23 Analyzed: 10/19/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	38.4			ng/l	40.0		96	70-130			
13C2-PFHxA	40.2			ng/l	40.0		101	70-130			
d5-EtFOSAA	161			ng/l	160		101	70-130			
HFPO-DA-13C3	39.8			ng/l	40.0		100	70-130			
LCS (W3J1462-BS1)						Prepared: 10/17/23 Analyzed: 10/19/23					
11CI-PF3OUdS	1.93	0.56	2.0	ng/l	2.00		97	70-130			J
9CI-PF3ONS	2.14	0.53	2.0	ng/l	2.00		107	70-130			
ADONA	1.87	0.55	2.0	ng/l	2.00		94	70-130			J
EtFOSAA	1.98	0.48	2.0	ng/l	2.00		99	70-130			J
HFPO-DA	2.11	0.87	2.0	ng/l	2.00		105	70-130			
MeFOSAA	2.27	0.58	2.0	ng/l	2.00		114	70-130			
PFBS	2.07	0.58	2.0	ng/l	2.00		104	70-130			
PFDA	1.88	0.45	2.0	ng/l	2.00		94	70-130			J
PFDoA	1.84	0.66	2.0	ng/l	2.00		92	70-130			J
PFHpA	1.96	0.53	2.0	ng/l	2.00		98	70-130			J
PFHxA	1.97	0.49	2.0	ng/l	2.00		98	70-130			J
PFHxS	2.01	0.59	2.0	ng/l	2.00		100	70-130			
PFNA	2.07	0.52	2.0	ng/l	2.00		104	70-130			
PFOA	2.12	0.67	2.0	ng/l	2.00		106	70-130			
PFOS	2.03	0.53	2.0	ng/l	2.00		101	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1462 - EPA 537.1 (Continued)											
LCS (W3J1462-BS1)						Prepared: 10/17/23 Analyzed: 10/19/23					
PFTeDA	2.52	0.45	2.0	ng/l	2.00		126	70-130			
PFTTrDA	1.69	0.42	2.0	ng/l	2.00		85	70-130			J
PFUnA	1.97	0.48	2.0	ng/l	2.00		98	70-130			J
<i>Surrogate(s)</i>											
13C2-PFDA	39.2			ng/l	40.0		98	70-130			
13C2-PFHxA	39.4			ng/l	40.0		99	70-130			
d5-EtFOSAA	162			ng/l	160		101	70-130			
HFPO-DA-13C3	38.0			ng/l	40.0		95	70-130			
LCS Dup (W3J1462-BS1)						Prepared: 10/17/23 Analyzed: 10/19/23					
11CI-PF3OUdS	2.12	0.56	2.0	ng/l	2.00		106	70-130	9	30	
9CI-PF3ONS	2.09	0.53	2.0	ng/l	2.00		105	70-130	2	30	
ADONA	2.13	0.55	2.0	ng/l	2.00		107	70-130	13	30	
EtFOSAA	2.58	0.48	2.0	ng/l	2.00		129	70-130	26	30	
HFPO-DA	2.40	0.87	2.0	ng/l	2.00		120	70-130	13	30	
MeFOSAA	2.50	0.58	2.0	ng/l	2.00		125	70-130	9	30	
PFBS	2.17	0.58	2.0	ng/l	2.00		108	70-130	5	30	
PFDA	1.88	0.45	2.0	ng/l	2.00		94	70-130	0.2	30	J
PFDoA	1.79	0.66	2.0	ng/l	2.00		90	70-130	3	30	J
PFHpA	2.14	0.53	2.0	ng/l	2.00		107	70-130	9	30	
PFHxA	2.28	0.49	2.0	ng/l	2.00		114	70-130	15	30	
PFHxS	2.29	0.59	2.0	ng/l	2.00		114	70-130	13	30	
PFNA	2.23	0.52	2.0	ng/l	2.00		112	70-130	7	30	
PFOA	2.24	0.67	2.0	ng/l	2.00		112	70-130	6	30	
PFOS	2.27	0.53	2.0	ng/l	2.00		113	70-130	11	30	
PFTeDA	2.45	0.45	2.0	ng/l	2.00		122	70-130	3	30	
PFTTrDA	1.81	0.42	2.0	ng/l	2.00		91	70-130	7	30	J
PFUnA	2.03	0.48	2.0	ng/l	2.00		102	70-130	3	30	
<i>Surrogate(s)</i>											
13C2-PFDA	41.7			ng/l	40.0		104	70-130			
13C2-PFHxA	42.7			ng/l	40.0		107	70-130			
d5-EtFOSAA	179			ng/l	160		112	70-130			
HFPO-DA-13C3	41.3			ng/l	40.0		103	70-130			
Batch: W3J1570 - EPA 537.1											
Blank (W3J1570-BLK1)						Prepared: 10/18/23 Analyzed: 10/24/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1570 - EPA 537.1 (Continued)											
Blank (W3J1570-BLK1)						Prepared: 10/18/23 Analyzed: 10/24/23					
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	37.9			ng/l	40.0		95	70-130			
13C2-PFHxA	33.2			ng/l	40.0		83	70-130			
d5-EtFOSAA	154			ng/l	160		96	70-130			
HFPO-DA-13C3	33.0			ng/l	40.0		83	70-130			
LCS (W3J1570-BS1)						Prepared: 10/18/23 Analyzed: 10/24/23					
11Cl-PF3OUdS	18.8	0.56	2.0	ng/l	20.0		94	70-130			
9Cl-PF3ONS	19.4	0.53	2.0	ng/l	20.0		97	70-130			
ADONA	19.2	0.55	2.0	ng/l	20.0		96	70-130			
EtFOSAA	20.0	0.48	2.0	ng/l	20.0		100	70-130			
HFPO-DA	19.9	0.87	2.0	ng/l	20.0		100	70-130			
MeFOSAA	21.0	0.58	2.0	ng/l	20.0		105	70-130			
PFBS	20.5	0.58	2.0	ng/l	20.0		103	70-130			
PFDA	17.6	0.45	2.0	ng/l	20.0		88	70-130			
PFDoA	19.1	0.66	2.0	ng/l	20.0		96	70-130			
PFHpA	19.4	0.53	2.0	ng/l	20.0		97	70-130			
PFHxA	19.1	0.49	2.0	ng/l	20.0		96	70-130			
PFHxS	21.5	0.59	2.0	ng/l	20.0		107	70-130			
PFNA	19.6	0.52	2.0	ng/l	20.0		98	70-130			
PFOA	19.7	0.67	2.0	ng/l	20.0		98	70-130			
PFOS	20.1	0.53	2.0	ng/l	20.0		101	70-130			
PFTeDA	21.1	0.45	2.0	ng/l	20.0		106	70-130			
PFTrDA	17.5	0.42	2.0	ng/l	20.0		88	70-130			
PFUnA	20.0	0.48	2.0	ng/l	20.0		100	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	39.4			ng/l	40.0		99	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1570 - EPA 537.1 (Continued)											
LCS (W3J1570-BS1)						Prepared: 10/18/23 Analyzed: 10/24/23					
<i>Surrogate(s)</i>											
13C2-PFHxA	40.6			ng/l	40.0		101	70-130			
d5-EtFOSAA	176			ng/l	160		110	70-130			
HFPO-DA-13C3	40.7			ng/l	40.0		102	70-130			
LCS Dup (W3J1570-BSD1)						Prepared: 10/18/23 Analyzed: 10/24/23					
11CI-PF3OUdS	19.2	0.56	2.0	ng/l	20.0		96	70-130	2	30	
9CI-PF3ONS	19.7	0.53	2.0	ng/l	20.0		98	70-130	1	30	
ADONA	19.5	0.55	2.0	ng/l	20.0		98	70-130	1	30	
EtFOSAA	19.8	0.48	2.0	ng/l	20.0		99	70-130	1	30	
HFPO-DA	20.5	0.87	2.0	ng/l	20.0		102	70-130	3	30	
MeFOSAA	20.4	0.58	2.0	ng/l	20.0		102	70-130	3	30	
PFBS	20.6	0.58	2.0	ng/l	20.0		103	70-130	0.4	30	
PFDA	18.0	0.45	2.0	ng/l	20.0		90	70-130	2	30	
PFDoA	18.6	0.66	2.0	ng/l	20.0		93	70-130	3	30	
PFHpA	19.9	0.53	2.0	ng/l	20.0		100	70-130	3	30	
PFHxA	19.6	0.49	2.0	ng/l	20.0		98	70-130	2	30	
PFHxS	22.3	0.59	2.0	ng/l	20.0		111	70-130	4	30	
PFNA	20.1	0.52	2.0	ng/l	20.0		101	70-130	3	30	
PFOA	20.1	0.67	2.0	ng/l	20.0		100	70-130	2	30	
PFOS	20.9	0.53	2.0	ng/l	20.0		104	70-130	4	30	
PFTeDA	21.1	0.45	2.0	ng/l	20.0		106	70-130	0.08	30	
PFTrDA	18.1	0.42	2.0	ng/l	20.0		91	70-130	3	30	
PFUnA	20.7	0.48	2.0	ng/l	20.0		103	70-130	3	30	
<i>Surrogate(s)</i>											
13C2-PFDA	40.6			ng/l	40.0		101	70-130			
13C2-PFHxA	40.9			ng/l	40.0		102	70-130			
d5-EtFOSAA	179			ng/l	160		112	70-130			
HFPO-DA-13C3	40.8			ng/l	40.0		102	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2											
Blank (W3J1154-BLK1)						Prepared & Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l				70-130			
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l				70-130			
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l				70-130			
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l				70-130			
1,1-Dichloroethane	ND	0.27	0.50	ug/l				70-130			
1,1-Dichloroethene	ND	0.16	0.50	ug/l				70-130			
1,1-Dichloropropene	ND	0.14	0.50	ug/l				70-130			
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l				70-130			
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l				70-130			
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l				70-130			
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l				70-130			
1,2-Dichloroethane	ND	0.24	0.50	ug/l				70-130			
1,2-Dichloropropane	ND	0.13	0.50	ug/l				70-130			
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l				70-130			
1,3-Dichloropropane	ND	0.27	0.50	ug/l				70-130			
1,3-Dichloropropene, Total	ND		0.50	ug/l				70-130			
2,2-Dichloropropane	ND	0.17	0.50	ug/l				70-130			
2-Butanone	ND	1.5	5.0	ug/l				70-130			
2-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
2-Hexanone	ND	1.2	5.0	ug/l				70-130			
4-Chlorotoluene	ND	0.15	0.50	ug/l				70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l				70-130			
Acetone	ND	3.1	5.0	ug/l				70-130			
Acrylonitrile	ND	1.5	2.0	ug/l				70-130			
Benzene	ND	0.15	0.50	ug/l				70-130			
Bromobenzene	ND	0.15	0.50	ug/l				70-130			
Bromochloromethane	ND	0.15	0.50	ug/l				70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l				70-130			
Bromoform	ND	0.38	0.50	ug/l				70-130			
Bromomethane	ND	0.27	0.50	ug/l				70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l				70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l				70-130			
Chlorobenzene	ND	0.15	0.50	ug/l				70-130			
Chloroethane	ND	0.17	0.50	ug/l				70-130			
Chloroform	ND	0.27	0.50	ug/l				70-130			
Chloromethane	ND	0.23	0.50	ug/l				70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l				70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l				70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l				70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
Blank (W3J1154-BLK1)						Prepared & Analyzed: 10/12/23					
Dibromomethane	ND	0.20	0.50	ug/l				70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l				70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l				70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l				70-130			
Ethylbenzene	ND	0.21	0.50	ug/l				70-130			
Freon 113	ND	1.5	5.0	ug/l				70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l				70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l				70-130			
m,p-Xylene	ND	0.33	0.50	ug/l				70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l				70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l				70-130			
Methylene chloride	ND	0.30	0.50	ug/l				70-130			
Naphthalene	ND	0.35	0.50	ug/l				70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l				70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l				70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l				70-130			
o-Xylene	ND	0.20	0.50	ug/l				70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l				70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l				70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l				70-130			
Styrene	ND	0.19	0.50	ug/l				70-130			
Tert-amyl methyl ether	ND	0.59	2.0	ug/l				70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l				70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l				70-130			
THMs, Total	ND		0.50	ug/l				70-130			
Toluene	ND	0.29	0.50	ug/l				70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l				70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l				70-130			
Trichloroethene	ND	0.18	0.50	ug/l				70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l				70-130			
Vinyl chloride	ND	0.18	0.50	ug/l				70-130			
Xylenes, Total	ND	0.33	0.50	ug/l				70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.2			ug/l	50.0		80	70-130			
4-Bromofluorobenzene	42.2			ug/l	50.0		84	70-130			
LCS (W3J1154-BS1)						Prepared & Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.43	0.24	0.50	ug/l	5.00		109	70-130			
1,1,1-Trichloroethane	5.28	0.26	0.50	ug/l	5.00		106	70-130			
1,1,2,2-Tetrachloroethane	5.08	0.20	0.50	ug/l	5.00		102	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)										
LCS (W3J1154-BS1)					Prepared & Analyzed: 10/12/23					
1,1,2-Trichloroethane	5.32	0.19	0.50	ug/l	5.00		106 70-130			
1,1-Dichloroethane	4.55	0.27	0.50	ug/l	5.00		91 70-130			
1,1-Dichloroethene	4.87	0.16	0.50	ug/l	5.00		97 70-130			
1,1-Dichloropropene	5.16	0.14	0.50	ug/l	5.00		103 70-130			
1,2,3-Trichlorobenzene	4.59	0.40	0.50	ug/l	5.00		92 70-130			
1,2,3-Trichloropropane	5.23	0.22	0.50	ug/l	5.00		105 70-130			
1,2,4-Trichlorobenzene	5.02	0.17	0.50	ug/l	5.00		100 70-130			
1,2,4-Trimethylbenzene	5.11	0.20	0.50	ug/l	5.00		102 70-130			
1,2-Dichloroethane	5.13	0.24	0.50	ug/l	5.00		103 70-130			
1,2-Dichloropropane	5.02	0.13	0.50	ug/l	5.00		100 70-130			
1,3,5-Trimethylbenzene	5.06	0.17	0.50	ug/l	5.00		101 70-130			
1,3-Dichloropropane	5.33	0.27	0.50	ug/l	5.00		107 70-130			
2,2-Dichloropropane	4.76	0.17	0.50	ug/l	5.00		95 70-130			
2-Butanone	4.54	1.5	5.0	ug/l	5.00		91 70-130			J
2-Chlorotoluene	4.85	0.15	0.50	ug/l	5.00		97 70-130			
2-Hexanone	4.98	1.2	5.0	ug/l	5.00		100 70-130			J
4-Chlorotoluene	4.76	0.15	0.50	ug/l	5.00		95 70-130			
4-Methyl-2-pentanone	4.87	1.8	5.0	ug/l	5.00		97 70-130			J
Acetone	49.6	3.1	5.0	ug/l	50.0		99 70-130			
Benzene	5.14	0.15	0.50	ug/l	5.00		103 70-130			
Bromobenzene	5.03	0.15	0.50	ug/l	5.00		101 70-130			
Bromochloromethane	4.48	0.15	0.50	ug/l	5.00		90 70-130			
Bromodichloromethane	5.14	0.24	0.50	ug/l	5.00		103 70-130			
Bromoform	4.97	0.38	0.50	ug/l	5.00		99 70-130			
Bromomethane	4.25	0.27	0.50	ug/l	5.00		85 70-130			
Carbon Disulfide	4.56	0.25	0.50	ug/l	5.00		91 70-130			
Carbon tetrachloride	5.04	0.27	0.50	ug/l	5.00		101 70-130			
Chlorobenzene	5.28	0.15	0.50	ug/l	5.00		106 70-130			
Chloroethane	4.04	0.17	0.50	ug/l	5.00		81 70-130			
Chloroform	4.82	0.27	0.50	ug/l	5.00		96 70-130			
Chloromethane	4.04	0.23	0.50	ug/l	5.00		81 70-130			
cis-1,2-Dichloroethene	4.61	0.25	0.50	ug/l	5.00		92 70-130			
cis-1,3-Dichloropropene	4.79	0.30	0.50	ug/l	5.00		96 70-130			
Dibromochloromethane	5.10	0.20	0.50	ug/l	5.00		102 70-130			
Dibromomethane	5.13	0.20	0.50	ug/l	5.00		103 70-130			
Dichlorodifluoromethane (Freon 12)	4.54	0.45	0.50	ug/l	5.00		91 70-130			
Di-isopropyl ether	20.5	1.1	2.0	ug/l	20.0		102 70-130			
Ethyl tert-butyl ether	19.7	1.0	2.0	ug/l	20.0		99 70-130			
Ethylbenzene	4.89	0.21	0.50	ug/l	5.00		98 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)										
LCS (W3J1154-BS1)					Prepared & Analyzed: 10/12/23					
Freon 113	5.08	1.5	5.0	ug/l	5.00		102 70-130			
Hexachlorobutadiene	4.85	0.40	0.50	ug/l	5.00		97 70-130			
Isopropylbenzene	4.83	0.18	0.50	ug/l	5.00		97 70-130			
m,p-Xylene	4.90	0.33	0.50	ug/l	5.00		98 70-130			
m-Dichlorobenzene	4.88	0.14	0.50	ug/l	5.00		98 70-130			
Methyl tert-butyl ether (MTBE)	19.1	0.94	2.0	ug/l	20.0		96 70-130			
Methylene chloride	4.45	0.30	0.50	ug/l	5.00		89 70-130			
Naphthalene	4.82	0.35	0.50	ug/l	5.00		96 70-130			
n-Butylbenzene	4.89	0.29	0.50	ug/l	5.00		98 70-130			
n-Propylbenzene	5.01	0.18	0.50	ug/l	5.00		100 70-130			
o-Dichlorobenzene	5.27	0.19	0.50	ug/l	5.00		105 70-130			
o-Xylene	5.05	0.20	0.50	ug/l	5.00		101 70-130			
p-Dichlorobenzene	5.27	0.18	0.50	ug/l	5.00		105 70-130			
p-Isopropyltoluene	5.00	0.25	0.50	ug/l	5.00		100 70-130			
sec-Butylbenzene	4.87	0.24	0.50	ug/l	5.00		97 70-130			
Styrene	5.04	0.19	0.50	ug/l	5.00		101 70-130			
Tert-amyl methyl ether	21.6	0.59	2.0	ug/l	20.0		108 70-130			
tert-Butylbenzene	4.80	0.18	0.50	ug/l	5.00		96 70-130			
Tetrachloroethene	4.87	0.18	0.50	ug/l	5.00		97 70-130			
Toluene	5.34	0.29	0.50	ug/l	5.00		107 70-130			
trans-1,2-Dichloroethene	4.59	0.26	0.50	ug/l	5.00		92 70-130			
trans-1,3-Dichloropropene	5.20	0.32	0.50	ug/l	5.00		104 70-130			
Trichloroethene	4.65	0.18	0.50	ug/l	5.00		93 70-130			
Trichlorofluoromethane	5.46	0.18	0.50	ug/l	5.00		109 70-130			
Vinyl chloride	4.25	0.18	0.50	ug/l	5.00		85 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	49.8			ug/l	50.0		100 70-130			
4-Bromofluorobenzene	48.4			ug/l	50.0		97 70-130			
LCS Dup (W3J1154-BSD1)					Prepared & Analyzed: 10/12/23					
1,1,1,2-Tetrachloroethane	5.30	0.24	0.50	ug/l	5.00		106 70-130	2	30	
1,1,1-Trichloroethane	4.89	0.26	0.50	ug/l	5.00		98 70-130	8	30	
1,1,2,2-Tetrachloroethane	5.28	0.20	0.50	ug/l	5.00		106 70-130	4	30	
1,1,2-Trichloroethane	5.31	0.19	0.50	ug/l	5.00		106 70-130	0.3	30	
1,1-Dichloroethane	4.59	0.27	0.50	ug/l	5.00		92 70-130	0.9	30	
1,1-Dichloroethene	4.99	0.16	0.50	ug/l	5.00		100 70-130	2	30	
1,1-Dichloropropene	4.82	0.14	0.50	ug/l	5.00		96 70-130	7	30	
1,2,3-Trichlorobenzene	4.59	0.40	0.50	ug/l	5.00		92 70-130	0.05	30	
1,2,3-Trichloropropane	5.27	0.22	0.50	ug/l	5.00		105 70-130	0.7	30	
1,2,4-Trichlorobenzene	4.95	0.17	0.50	ug/l	5.00		99 70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
LCS Dup (W3J1154-BSD1)					Prepared & Analyzed: 10/12/23						
1,2,4-Trimethylbenzene	4.93	0.20	0.50	ug/l	5.00		99	70-130	4	30	
1,2-Dichloroethane	5.14	0.24	0.50	ug/l	5.00		103	70-130	0.2	30	
1,2-Dichloropropane	4.96	0.13	0.50	ug/l	5.00		99	70-130	1	30	
1,3,5-Trimethylbenzene	4.82	0.17	0.50	ug/l	5.00		96	70-130	5	30	
1,3-Dichloropropane	5.23	0.27	0.50	ug/l	5.00		105	70-130	2	30	
2,2-Dichloropropane	4.66	0.17	0.50	ug/l	5.00		93	70-130	2	30	
2-Butanone	4.45	1.5	5.0	ug/l	5.00		89	70-130	2	30	J
2-Chlorotoluene	4.71	0.15	0.50	ug/l	5.00		94	70-130	3	30	
2-Hexanone	5.14	1.2	5.0	ug/l	5.00		103	70-130	3	30	
4-Chlorotoluene	4.51	0.15	0.50	ug/l	5.00		90	70-130	6	30	
4-Methyl-2-pentanone	4.81	1.8	5.0	ug/l	5.00		96	70-130	1	30	J
Acetone	52.0	3.1	5.0	ug/l	50.0		104	70-130	5	30	
Benzene	4.84	0.15	0.50	ug/l	5.00		97	70-130	6	30	
Bromobenzene	4.98	0.15	0.50	ug/l	5.00		100	70-130	0.9	30	
Bromochloromethane	4.41	0.15	0.50	ug/l	5.00		88	70-130	2	30	
Bromodichloromethane	5.11	0.24	0.50	ug/l	5.00		102	70-130	0.6	30	
Bromoform	5.01	0.38	0.50	ug/l	5.00		100	70-130	0.8	30	
Bromomethane	4.21	0.27	0.50	ug/l	5.00		84	70-130	0.8	30	
Carbon Disulfide	4.47	0.25	0.50	ug/l	5.00		89	70-130	2	30	
Carbon tetrachloride	4.89	0.27	0.50	ug/l	5.00		98	70-130	3	30	
Chlorobenzene	5.13	0.15	0.50	ug/l	5.00		103	70-130	3	30	
Chloroethane	4.09	0.17	0.50	ug/l	5.00		82	70-130	1	30	
Chloroform	4.47	0.27	0.50	ug/l	5.00		89	70-130	8	30	
Chloromethane	4.18	0.23	0.50	ug/l	5.00		84	70-130	3	30	
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00		91	70-130	1	30	
cis-1,3-Dichloropropene	4.76	0.30	0.50	ug/l	5.00		95	70-130	0.8	30	
Dibromochloromethane	5.05	0.20	0.50	ug/l	5.00		101	70-130	1	30	
Dibromomethane	5.27	0.20	0.50	ug/l	5.00		105	70-130	3	30	
Dichlorodifluoromethane (Freon 12)	4.64	0.45	0.50	ug/l	5.00		93	70-130	2	30	
Di-isopropyl ether	20.3	1.1	2.0	ug/l	20.0		102	70-130	0.9	30	
Ethyl tert-butyl ether	19.8	1.0	2.0	ug/l	20.0		99	70-130	0.4	30	
Ethylbenzene	4.50	0.21	0.50	ug/l	5.00		90	70-130	8	30	
Freon 113	4.95	1.5	5.0	ug/l	5.00		99	70-130	3	30	J
Hexachlorobutadiene	4.71	0.40	0.50	ug/l	5.00		94	70-130	3	30	
Isopropylbenzene	4.53	0.18	0.50	ug/l	5.00		91	70-130	6	30	
m,p-Xylene	4.61	0.33	0.50	ug/l	5.00		92	70-130	6	30	
m-Dichlorobenzene	4.81	0.14	0.50	ug/l	5.00		96	70-130	1	30	
Methyl tert-butyl ether (MTBE)	19.6	0.94	2.0	ug/l	20.0		98	70-130	3	30	
Methylene chloride	4.53	0.30	0.50	ug/l	5.00		91	70-130	2	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1154 - EPA 524.2 (Continued)											
LCS Dup (W3J1154-BSD1)					Prepared & Analyzed: 10/12/23						
Naphthalene	4.87	0.35	0.50	ug/l	5.00		97	70-130	1	30	
n-Butylbenzene	4.65	0.29	0.50	ug/l	5.00		93	70-130	5	30	
n-Propylbenzene	4.76	0.18	0.50	ug/l	5.00		95	70-130	5	30	
o-Dichlorobenzene	5.27	0.19	0.50	ug/l	5.00		105	70-130	0.1	30	
o-Xylene	4.83	0.20	0.50	ug/l	5.00		97	70-130	4	30	
p-Dichlorobenzene	5.22	0.18	0.50	ug/l	5.00		104	70-130	1	30	
p-Isopropyltoluene	4.77	0.25	0.50	ug/l	5.00		95	70-130	5	30	
sec-Butylbenzene	4.68	0.24	0.50	ug/l	5.00		94	70-130	4	30	
Styrene	4.82	0.19	0.50	ug/l	5.00		96	70-130	4	30	
Tert-amyl methyl ether	21.3	0.59	2.0	ug/l	20.0		106	70-130	1	30	
tert-Butylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130	5	30	
Tetrachloroethene	4.66	0.18	0.50	ug/l	5.00		93	70-130	5	30	
Toluene	5.10	0.29	0.50	ug/l	5.00		102	70-130	5	30	
trans-1,2-Dichloroethene	4.59	0.26	0.50	ug/l	5.00		92	70-130	0.1	30	
trans-1,3-Dichloropropene	5.08	0.32	0.50	ug/l	5.00		102	70-130	2	30	
Trichloroethene	4.47	0.18	0.50	ug/l	5.00		89	70-130	4	30	
Trichlorofluoromethane	4.34	0.18	0.50	ug/l	5.00		87	70-130	23	30	
Vinyl chloride	4.23	0.18	0.50	ug/l	5.00		85	70-130	0.5	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	51.3			ug/l	50.0		103	70-130			
4-Bromofluorobenzene	49.8			ug/l	50.0		100	70-130			

Batch: W3J1179 - EPA 524.2

Blank (W3J1179-BLK1)					Prepared: 10/13/23 Analyzed: 10/15/23						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
Blank (W3J1179-BLK1)					Prepared: 10/13/23 Analyzed: 10/15/23						
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
Blank (W3J1179-BLK1)											
Prepared: 10/13/23 Analyzed: 10/15/23											
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	45.6			ug/l	50.0		91	70-130			
LCS (W3J1179-BS1)											
Prepared: 10/13/23 Analyzed: 10/15/23											
1,1,1,2-Tetrachloroethane	4.91	0.24	0.50	ug/l	5.00		98	70-130			
1,1,1-Trichloroethane	4.72	0.26	0.50	ug/l	5.00		94	70-130			
1,1,2,2-Tetrachloroethane	4.70	0.20	0.50	ug/l	5.00		94	70-130			
1,1,2-Trichloroethane	4.75	0.19	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethane	4.76	0.27	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethene	4.09	0.16	0.50	ug/l	5.00		82	70-130			
1,1-Dichloropropene	4.29	0.14	0.50	ug/l	5.00		86	70-130			
1,2,3-Trichlorobenzene	4.86	0.40	0.50	ug/l	5.00		97	70-130			
1,2,3-Trichloropropane	4.83	0.22	0.50	ug/l	5.00		97	70-130			
1,2,4-Trichlorobenzene	5.10	0.17	0.50	ug/l	5.00		102	70-130			
1,2,4-Trimethylbenzene	4.69	0.20	0.50	ug/l	5.00		94	70-130			
1,2-Dichloroethane	4.68	0.24	0.50	ug/l	5.00		94	70-130			
1,2-Dichloropropane	4.75	0.13	0.50	ug/l	5.00		95	70-130			
1,3,5-Trimethylbenzene	4.61	0.17	0.50	ug/l	5.00		92	70-130			
1,3-Dichloropropane	4.99	0.27	0.50	ug/l	5.00		100	70-130			
2,2-Dichloropropane	4.91	0.17	0.50	ug/l	5.00		98	70-130			
2-Butanone	4.49	1.5	5.0	ug/l	5.00		90	70-130			J
2-Chlorotoluene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
2-Hexanone	4.91	1.2	5.0	ug/l	5.00		98	70-130			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS (W3J1179-BS1)					Prepared: 10/13/23 Analyzed: 10/15/23						
4-Chlorotoluene	4.64	0.15	0.50	ug/l	5.00		93	70-130			
4-Methyl-2-pentanone	4.70	1.8	5.0	ug/l	5.00		94	70-130			J
Acetone	41.8	3.1	5.0	ug/l	50.0		84	70-130			
Benzene	4.63	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromochloromethane	5.04	0.15	0.50	ug/l	5.00		101	70-130			
Bromodichloromethane	4.61	0.24	0.50	ug/l	5.00		92	70-130			
Bromoform	4.71	0.38	0.50	ug/l	5.00		94	70-130			
Bromomethane	4.86	0.27	0.50	ug/l	5.00		97	70-130			
Carbon Disulfide	3.68	0.25	0.50	ug/l	5.00		74	70-130			
Carbon tetrachloride	4.48	0.27	0.50	ug/l	5.00		90	70-130			
Chlorobenzene	4.79	0.15	0.50	ug/l	5.00		96	70-130			
Chloroethane	5.07	0.17	0.50	ug/l	5.00		101	70-130			
Chloroform	5.07	0.27	0.50	ug/l	5.00		101	70-130			
Chloromethane	4.29	0.23	0.50	ug/l	5.00		86	70-130			
cis-1,2-Dichloroethene	4.77	0.25	0.50	ug/l	5.00		95	70-130			
cis-1,3-Dichloropropene	4.59	0.30	0.50	ug/l	5.00		92	70-130			
Dibromochloromethane	4.84	0.20	0.50	ug/l	5.00		97	70-130			
Dibromomethane	4.67	0.20	0.50	ug/l	5.00		93	70-130			
Dichlorodifluoromethane (Freon 12)	3.97	0.45	0.50	ug/l	5.00		79	70-130			
Di-isopropyl ether	20.7	1.1	2.0	ug/l	20.0		103	70-130			
Ethyl tert-butyl ether	20.3	1.0	2.0	ug/l	20.0		101	70-130			
Ethylbenzene	4.24	0.21	0.50	ug/l	5.00		85	70-130			
Freon 113	4.14	1.5	5.0	ug/l	5.00		83	70-130			J
Hexachlorobutadiene	5.07	0.40	0.50	ug/l	5.00		101	70-130			
Isopropylbenzene	4.22	0.18	0.50	ug/l	5.00		84	70-130			
m,p-Xylene	4.44	0.33	0.50	ug/l	5.00		89	70-130			
m-Dichlorobenzene	5.16	0.14	0.50	ug/l	5.00		103	70-130			
Methyl tert-butyl ether (MTBE)	19.8	0.94	2.0	ug/l	20.0		99	70-130			
Methylene chloride	5.28	0.30	0.50	ug/l	5.00		106	70-130			
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99	70-130			
n-Butylbenzene	4.60	0.29	0.50	ug/l	5.00		92	70-130			
n-Propylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130			
o-Dichlorobenzene	4.92	0.19	0.50	ug/l	5.00		98	70-130			
o-Xylene	4.69	0.20	0.50	ug/l	5.00		94	70-130			
p-Dichlorobenzene	5.18	0.18	0.50	ug/l	5.00		104	70-130			
p-Isopropyltoluene	4.64	0.25	0.50	ug/l	5.00		93	70-130			
sec-Butylbenzene	4.51	0.24	0.50	ug/l	5.00		90	70-130			
Styrene	4.56	0.19	0.50	ug/l	5.00		91	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS (W3J1179-BS1)											
					Prepared: 10/13/23 Analyzed: 10/15/23						
Tert-amyl methyl ether	19.6	0.59	2.0	ug/l	20.0		98	70-130			
tert-Butylbenzene	4.37	0.18	0.50	ug/l	5.00		87	70-130			
Tetrachloroethene	4.66	0.18	0.50	ug/l	5.00		93	70-130			
Toluene	4.36	0.29	0.50	ug/l	5.00		87	70-130			
trans-1,2-Dichloroethene	4.78	0.26	0.50	ug/l	5.00		96	70-130			
trans-1,3-Dichloropropene	5.00	0.32	0.50	ug/l	5.00		100	70-130			
Trichloroethene	4.26	0.18	0.50	ug/l	5.00		85	70-130			
Trichlorofluoromethane	5.18	0.18	0.50	ug/l	5.00		104	70-130			
Vinyl chloride	4.50	0.18	0.50	ug/l	5.00		90	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.7			ug/l	50.0		107	70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104	70-130			
LCS Dup (W3J1179-BSD1)											
					Prepared: 10/13/23 Analyzed: 10/15/23						
1,1,1,2-Tetrachloroethane	4.80	0.24	0.50	ug/l	5.00		96	70-130	2	30	
1,1,1-Trichloroethane	4.07	0.26	0.50	ug/l	5.00		81	70-130	15	30	
1,1,2,2-Tetrachloroethane	4.67	0.20	0.50	ug/l	5.00		93	70-130	0.7	30	
1,1,2-Trichloroethane	4.59	0.19	0.50	ug/l	5.00		92	70-130	3	30	
1,1-Dichloroethane	4.86	0.27	0.50	ug/l	5.00		97	70-130	2	30	
1,1-Dichloroethene	3.78	0.16	0.50	ug/l	5.00		76	70-130	8	30	
1,1-Dichloropropene	3.90	0.14	0.50	ug/l	5.00		78	70-130	10	30	
1,2,3-Trichlorobenzene	4.67	0.40	0.50	ug/l	5.00		93	70-130	4	30	
1,2,3-Trichloropropane	4.80	0.22	0.50	ug/l	5.00		96	70-130	0.8	30	
1,2,4-Trichlorobenzene	4.89	0.17	0.50	ug/l	5.00		98	70-130	4	30	
1,2,4-Trimethylbenzene	4.44	0.20	0.50	ug/l	5.00		89	70-130	5	30	
1,2-Dichloroethane	4.61	0.24	0.50	ug/l	5.00		92	70-130	2	30	
1,2-Dichloropropane	4.59	0.13	0.50	ug/l	5.00		92	70-130	3	30	
1,3,5-Trimethylbenzene	4.29	0.17	0.50	ug/l	5.00		86	70-130	7	30	
1,3-Dichloropropane	4.81	0.27	0.50	ug/l	5.00		96	70-130	4	30	
2,2-Dichloropropane	4.72	0.17	0.50	ug/l	5.00		94	70-130	4	30	
2-Butanone	4.45	1.5	5.0	ug/l	5.00		89	70-130	1	30	J
2-Chlorotoluene	4.43	0.15	0.50	ug/l	5.00		89	70-130	5	30	
2-Hexanone	4.70	1.2	5.0	ug/l	5.00		94	70-130	4	30	J
4-Chlorotoluene	4.44	0.15	0.50	ug/l	5.00		89	70-130	4	30	
4-Methyl-2-pentanone	4.55	1.8	5.0	ug/l	5.00		91	70-130	3	30	J
Acetone	42.0	3.1	5.0	ug/l	50.0		84	70-130	0.6	30	
Benzene	4.40	0.15	0.50	ug/l	5.00		88	70-130	5	30	
Bromobenzene	4.86	0.15	0.50	ug/l	5.00		97	70-130	0.08	30	
Bromochloromethane	5.05	0.15	0.50	ug/l	5.00		101	70-130	0.2	30	
Bromodichloromethane	4.48	0.24	0.50	ug/l	5.00		90	70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS Dup (W3J1179-BSD1)											
						Prepared: 10/13/23 Analyzed: 10/15/23					
Bromoform	4.67	0.38	0.50	ug/l	5.00		93	70-130	1	30	
Bromomethane	4.67	0.27	0.50	ug/l	5.00		93	70-130	4	30	
Carbon Disulfide	3.32	0.25	0.50	ug/l	5.00		66	70-130	10	30	Q-ME
Carbon tetrachloride	4.04	0.27	0.50	ug/l	5.00		81	70-130	10	30	
Chlorobenzene	4.63	0.15	0.50	ug/l	5.00		93	70-130	3	30	
Chloroethane	4.52	0.17	0.50	ug/l	5.00		90	70-130	11	30	
Chloroform	4.93	0.27	0.50	ug/l	5.00		99	70-130	3	30	
Chloromethane	4.22	0.23	0.50	ug/l	5.00		84	70-130	2	30	
cis-1,2-Dichloroethene	4.70	0.25	0.50	ug/l	5.00		94	70-130	2	30	
cis-1,3-Dichloropropene	4.46	0.30	0.50	ug/l	5.00		89	70-130	3	30	
Dibromochloromethane	4.75	0.20	0.50	ug/l	5.00		95	70-130	2	30	
Dibromomethane	4.60	0.20	0.50	ug/l	5.00		92	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	3.78	0.45	0.50	ug/l	5.00		76	70-130	5	30	
Di-isopropyl ether	19.9	1.1	2.0	ug/l	20.0		99	70-130	4	30	
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100	70-130	1	30	
Ethylbenzene	3.85	0.21	0.50	ug/l	5.00		77	70-130	10	30	
Freon 113	3.56	1.5	5.0	ug/l	5.00		71	70-130	15	30	J
Hexachlorobutadiene	4.75	0.40	0.50	ug/l	5.00		95	70-130	7	30	
Isopropylbenzene	3.86	0.18	0.50	ug/l	5.00		77	70-130	9	30	
m,p-Xylene	4.15	0.33	0.50	ug/l	5.00		83	70-130	7	30	
m-Dichlorobenzene	5.00	0.14	0.50	ug/l	5.00		100	70-130	3	30	
Methyl tert-butyl ether (MTBE)	15.1	0.94	2.0	ug/l	20.0		75	70-130	27	30	
Methylene chloride	3.83	0.30	0.50	ug/l	5.00		77	70-130	32	30	Q-12
Naphthalene	5.14	0.35	0.50	ug/l	5.00		103	70-130	4	30	
n-Butylbenzene	4.25	0.29	0.50	ug/l	5.00		85	70-130	8	30	
n-Propylbenzene	4.24	0.18	0.50	ug/l	5.00		85	70-130	8	30	
o-Dichlorobenzene	4.83	0.19	0.50	ug/l	5.00		97	70-130	2	30	
o-Xylene	4.46	0.20	0.50	ug/l	5.00		89	70-130	5	30	
p-Dichlorobenzene	5.03	0.18	0.50	ug/l	5.00		101	70-130	3	30	
p-Isopropyltoluene	4.27	0.25	0.50	ug/l	5.00		85	70-130	8	30	
sec-Butylbenzene	4.09	0.24	0.50	ug/l	5.00		82	70-130	10	30	
Styrene	4.38	0.19	0.50	ug/l	5.00		88	70-130	4	30	
Tert-amyl methyl ether	19.1	0.59	2.0	ug/l	20.0		96	70-130	3	30	
tert-Butylbenzene	3.99	0.18	0.50	ug/l	5.00		80	70-130	9	30	
Tetrachloroethene	4.27	0.18	0.50	ug/l	5.00		85	70-130	9	30	
Toluene	4.13	0.29	0.50	ug/l	5.00		83	70-130	6	30	
trans-1,2-Dichloroethene	3.60	0.26	0.50	ug/l	5.00		72	70-130	28	30	
trans-1,3-Dichloropropene	4.85	0.32	0.50	ug/l	5.00		97	70-130	3	30	
Trichloroethene	3.91	0.18	0.50	ug/l	5.00		78	70-130	9	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/20/2023 16:02

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS Dup (W3J1179-BSD1)											
					Prepared: 10/13/23 Analyzed: 10/15/23						
Trichlorofluoromethane	4.29	0.18	0.50	ug/l	5.00		86	70-130	19	30	
Vinyl chloride	4.21	0.18	0.50	ug/l	5.00		84	70-130	7	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.2			ug/l	50.0		108	70-130			
4-Bromofluorobenzene	52.7			ug/l	50.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/20/2023 16:02

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
Q-ME	Acceptable QC with marginal exceedance
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3509039**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150%	
PROJECT MANAGER: Chris Kindle		SAMPLER: invoice to Rose Ford, Rford@BrwnCald.com						<input type="checkbox"/> 24 Hour Rush 100%	
								<input type="checkbox"/> 48-72 Hour Rush 75%	
								<input type="checkbox"/> 4 - 5 Day Rush 30%	
								<input type="checkbox"/> Rush Extractions 50%	
								<input type="checkbox"/> 10 - 15 Business Days	
								<input type="checkbox"/> QA/QC Data Package	
								Charges will apply for weekends/holidays	
								Method of Shipment:	
								COMMENTS	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA									
	10/04/23	15:20	G	PT-GAC18-S11	9	X	X	X	X									
		10:10	G	PT-GAC8-S11	9	X	X	X	X									
		14:43	G	PT-GAC19-S11	9	X	X	X	X									
		10:10	G	PT-GAC8-S11D	9	X	X	X	X									
		9:45	G	PT-GAC8-S23	9	X	X	X	X									
		9:25	G	PT-GAC7-S23	9	X	X	X	X									
		14:55	G	PT-GAC18-S23	9	X	X	X	X									
		14:18	G	PT-GAC19-S23	9	X	X	X	X									
		9:45	G	PT-GAC8-S23D	9	X	X	X	X									
		9:50	G	PT-GAC7-S11	9	X	X	X	X									
	10/04/23	16:50	G	PT-GAC15-S23T	9	X	X	X	X									

* Sampled date 10/4/23
was taken from containers
JG 10/05/23

RELINQUISHED BY 	DATE / TIME 10/15/23 2:20	RECEIVED BY 	SAMPLE CONDITION: Actual Temperature: 4.9 T-0291 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous Sl = Skudge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY 	DATE / TIME 10/15/23 4:10	RECEIVED BY 		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



Sample Receipt Checklist

Weck WKO: **3109039** Date/Time Received: **10/05/23 16:14**
 WKO Logged by: **Jaime Gomez** # of Samples: **11**
 Samples Checked by: **Jaime Gomez** Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4.9 °C
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1; 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Amr added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: 10/09/23

Work Orders: 3J09040

Report Date: 10/23/2023

Project: COSM 97-005

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

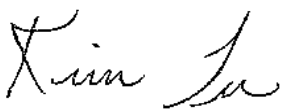
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
10/23/2023 16:24

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GS7-S4	Pet-Shin Wu	3J09040-01	Water	10/05/23 08:50	
PT-GS7-S8	Pet-Shin Wu	3J09040-02	Water	10/04/23 08:50	
PT-GS8-S4	Pet-Shin Wu	3J09040-03	Water	10/04/23 09:10	
PT-GS8-S8	Pet-Shin Wu	3J09040-04	Water	10/04/23 09:10	
PT-GS8-S4D	Pet-Shin Wu	3J09040-05	Water	10/04/23 09:10	
PT-GS8-S8D	Pet-Shin Wu	3J09040-06	Water	10/04/23 09:10	
PT-GS19-S4	Pet-Shin Wu	3J09040-07	Water	10/04/23 13:43	
PT-GS19-S8	Pet-Shin Wu	3J09040-08	Water	10/04/23 13:43	
PT-GS18-S4	Pet-Shin Wu	3J09040-09	Water	10/04/23 14:20	
PT-GS18-S8	Pet-Shin Wu	3J09040-10	Water	10/04/23 14:20	
PT-GS20-S4	Pet-Shin Wu	3J09040-11	Water	10/04/23 14:50	
PT-GS20-S8	Pet-Shin Wu	3J09040-12	Water	10/04/23 14:50	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/23/2023 16:24

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GS7-S4
3J09040-01 (Water) Sampled: 10/05/23 8:50 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1217		Preparation: EPA 200.2		Prepared: 10/13/23 10:33		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	0.059	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	4.5	2.7	5.0	ug/l	1	10/20/23	J
Manganese, Total	0.0073	0.00083	0.0050	mg/l	1	10/20/23	

Sample Results

Sample: PT-GS7-S8
3J09040-02 (Water) Sampled: 10/04/23 8:50 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1217		Preparation: EPA 200.2		Prepared: 10/13/23 10:33		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/20/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/20/23	

Sample Results

Sample: PT-GS8-S4
3J09040-03 (Water) Sampled: 10/04/23 9:10 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1217		Preparation: EPA 200.2		Prepared: 10/13/23 10:33		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	0.033	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	4.1	2.7	5.0	ug/l	1	10/20/23	J
Manganese, Total	0.0056	0.00083	0.0050	mg/l	1	10/20/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/23/2023 16:24

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GS8-S8
3J09040-04 (Water) Sampled: 10/04/23 9:10 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1217		Preparation: EPA 200.2		Prepared: 10/13/23 10:33		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/20/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/20/23	

Sample Results

(Continued)

Sample: PT-GS8-S4D
3J09040-05 (Water) Sampled: 10/04/23 9:10 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1217		Preparation: EPA 200.2		Prepared: 10/13/23 10:33		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	0.044	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	4.1	2.7	5.0	ug/l	1	10/20/23	J
Manganese, Total	0.0071	0.00083	0.0050	mg/l	1	10/20/23	

Sample Results

(Continued)

Sample: PT-GS8-S8D
3J09040-06 (Water) Sampled: 10/04/23 9:10 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1217		Preparation: EPA 200.2		Prepared: 10/13/23 10:33		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/20/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/20/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/23/2023 16:24

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GS19-S4
3J09040-07 (Water) Sampled: 10/04/23 13:43 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1217		Preparation: EPA 200.2		Prepared: 10/13/23 10:33		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	0.016	0.0065	0.030	mg/l	1	10/20/23	J
Manganese, Dissolved	4.3	2.7	5.0	ug/l	1	10/20/23	J
Manganese, Total	0.0049	0.00083	0.0050	mg/l	1	10/20/23	J

Sample Results

(Continued)

Sample: PT-GS19-S8
3J09040-08 (Water) Sampled: 10/04/23 13:43 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1217		Preparation: EPA 200.2		Prepared: 10/13/23 10:33		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/20/23	
Manganese, Total	0.0019	0.00083	0.0050	mg/l	1	10/20/23	J

Sample Results

(Continued)

Sample: PT-GS18-S4
3J09040-09 (Water) Sampled: 10/04/23 14:20 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1223		Preparation: EPA 200.2		Prepared: 10/13/23 10:42		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	0.014	0.0065	0.030	mg/l	1	10/20/23	J
Manganese, Dissolved	4.3	2.7	5.0	ug/l	1	10/20/23	J
Manganese, Total	0.0055	0.00083	0.0050	mg/l	1	10/20/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/23/2023 16:24

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GS18-S8
3J09040-10 (Water) Sampled: 10/04/23 14:20 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1223		Preparation: EPA 200.2		Prepared: 10/13/23 10:42		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/20/23	
Manganese, Total	0.0018	0.00083	0.0050	mg/l	1	10/20/23	J

Sample Results

(Continued)

Sample: PT-GS20-S4
3J09040-11 (Water) Sampled: 10/04/23 14:50 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1223		Preparation: EPA 200.2		Prepared: 10/13/23 10:42		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	0.12	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	4.4	2.7	5.0	ug/l	1	10/20/23	J
Manganese, Total	0.016	0.00083	0.0050	mg/l	1	10/20/23	

Sample Results

(Continued)

Sample: PT-GS20-S8
3J09040-12 (Water) Sampled: 10/04/23 14:50 by Pet-Shin Wu

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1223		Preparation: EPA 200.2		Prepared: 10/13/23 10:42		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/20/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/20/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/20/23	
Manganese, Total	0.0017	0.00083	0.0050	mg/l	1	10/20/23	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/23/2023 16:24

Project Manager: Brown & Caldwell

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1217 - EPA 200.7											
Blank (W3J1217-BLK1)					Prepared: 10/13/23 Analyzed: 10/20/23						
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W3J1217-BS1)					Prepared: 10/13/23 Analyzed: 10/20/23						
Iron, Dissolved	215	5.0	30	ug/l	200		108	85-115			
Iron, Total	0.215	0.0065	0.030	mg/l	0.200		108	85-115			
Manganese, Dissolved	199	2.7	5.0	ug/l	200		100	85-115			
Manganese, Total	0.199	0.00083	0.0050	mg/l	0.200		100	85-115			
Matrix Spike (W3J1217-MS1)					Source: 3J09040-01 Prepared: 10/13/23 Analyzed: 10/20/23						
Iron, Total	0.275	0.0065	0.030	mg/l	0.200	0.0588	108	70-130			
Manganese, Dissolved	203	2.7	5.0	ug/l	200	4.51	99	70-130			
Manganese, Total	0.203	0.00083	0.0050	mg/l	0.200	0.00732	98	70-130			
Matrix Spike (W3J1217-MS2)					Source: 3J09040-08 Prepared: 10/13/23 Analyzed: 10/20/23						
Iron, Dissolved	218	5.0	30	ug/l	200	ND	109	70-130			
Iron, Total	0.218	0.0065	0.030	mg/l	0.200	ND	109	70-130			
Manganese, Dissolved	201	2.7	5.0	ug/l	200	ND	101	70-130			
Manganese, Total	0.201	0.00083	0.0050	mg/l	0.200	0.00194	100	70-130			
Matrix Spike Dup (W3J1217-MSD1)					Source: 3J09040-01 Prepared: 10/13/23 Analyzed: 10/20/23						
Iron, Total	0.281	0.0065	0.030	mg/l	0.200	0.0588	111	70-130	2	30	
Manganese, Dissolved	204	2.7	5.0	ug/l	200	4.51	100	70-130	0.5	30	
Manganese, Total	0.204	0.00083	0.0050	mg/l	0.200	0.00732	98	70-130	0.5	30	
Matrix Spike Dup (W3J1217-MSD2)					Source: 3J09040-08 Prepared: 10/13/23 Analyzed: 10/20/23						
Iron, Dissolved	215	5.0	30	ug/l	200	ND	107	70-130	1	30	
Iron, Total	0.215	0.0065	0.030	mg/l	0.200	ND	107	70-130	1	30	
Manganese, Dissolved	200	2.7	5.0	ug/l	200	ND	100	70-130	0.8	30	
Manganese, Total	0.200	0.00083	0.0050	mg/l	0.200	0.00194	99	70-130	0.8	30	
Batch: W3J1223 - EPA 200.7											
Blank (W3J1223-BLK1)					Prepared: 10/13/23 Analyzed: 10/20/23						
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W3J1223-BS1)					Prepared: 10/13/23 Analyzed: 10/20/23						
Iron, Dissolved	210	5.0	30	ug/l	200		105	85-115			
Iron, Total	0.210	0.0065	0.030	mg/l	0.200		105	85-115			
Manganese, Dissolved	194	2.7	5.0	ug/l	200		97	85-115			
Manganese, Total	0.194	0.00083	0.0050	mg/l	0.200		97	85-115			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/23/2023 16:24

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1223 - EPA 200.7 (Continued)											
Matrix Spike (W3J1223-MS1)			Source: 3J09037-02			Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	211	5.0	30	ug/l	200	ND	106	70-130			
Iron, Total	0.211	0.0065	0.030	mg/l	0.200	ND	106	70-130			
Manganese, Dissolved	196	2.7	5.0	ug/l	200	ND	98	70-130			
Manganese, Total	0.196	0.00083	0.0050	mg/l	0.200	0.00212	97	70-130			
Matrix Spike (W3J1223-MS2)			Source: 3J09040-11			Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	346	5.0	30	ug/l	200	ND	173	70-130			
Iron, Total	0.346	0.0065	0.030	mg/l	0.200	0.122	112	70-130			
Manganese, Dissolved	211	2.7	5.0	ug/l	200	4.42	103	70-130			
Manganese, Total	0.211	0.00083	0.0050	mg/l	0.200	0.0163	97	70-130			
Matrix Spike Dup (W3J1223-MSD1)			Source: 3J09037-02			Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	214	5.0	30	ug/l	200	ND	107	70-130	1	30	
Iron, Total	0.214	0.0065	0.030	mg/l	0.200	ND	107	70-130	1	30	
Manganese, Dissolved	200	2.7	5.0	ug/l	200	ND	100	70-130	2	30	
Manganese, Total	0.200	0.00083	0.0050	mg/l	0.200	0.00212	99	70-130	2	30	
Matrix Spike Dup (W3J1223-MSD2)			Source: 3J09040-11			Prepared: 10/13/23 Analyzed: 10/20/23					
Iron, Dissolved	344	5.0	30	ug/l	200	ND	172	70-130	0.5	30	
Iron, Total	0.344	0.0065	0.030	mg/l	0.200	0.122	111	70-130	0.5	30	
Manganese, Dissolved	211	2.7	5.0	ug/l	200	4.42	104	70-130	0.1	30	
Manganese, Total	0.211	0.00083	0.0050	mg/l	0.200	0.0163	98	70-130	0.1	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/23/2023 16:24

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # 3209040

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: <u>ckindle@BrwnCald.com</u>		200.7 Fe, Total and Dissolved 200.8 Mn, Total and Dissolved				<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER: Chris Kindle		SAMPLER: <u>Ref-Shin Wu</u>						invoice to Rose Ford, Rford@BrwnCald.com	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved	COMMENTS	
	10/4/23	8:30	GW	PT-GS7-S4	2	✓	✓	Analyze both Fe and Mn by EPA 200.7	
	10/4/23	8:50	GW	PT-GS7-S8	2	✓	✓		
		9:10	GW	PT-GS8-S4	2	✓	✓		
		9:10	GW	PT-GS8-S8	2	✓	✓		
		9:10	GW	PT-GS8-S4D	2	✓	✓		
		9:10	GW	PT-GS8-S8D	2	✓	✓		
		13:43	GW	PT-GS19-S4	2	✓	✓		
		13:43	GW	PT-GS19-S8	2	✓	✓		
		14:20	GW	PT-GS18-S4	2	✓	✓		
		14:20	GW	PT-GS18-S8	2	✓	✓		
		14:50	GW	PT-GS20-S4	2	✓	✓		
		14:50	GW	PT-GS20-S8	2	✓	✓		

RELINQUISHED BY <u>[Signature]</u>	DATE / TIME 10/5/23 2:25	RECEIVED BY <u>[Signature]</u>	SAMPLE CONDITION: Actual Temperature: <u>4.9</u> T-0261	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <u>[Signature]</u>	DATE / TIME 10/5/23 4:10	RECEIVED BY <u>[Signature]</u>	Received On Ice Preserved Evidence Seals Present Container Attached Preserved at Lab	<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **3109040**

Date/Time Received: 10/5/2023 16:14

WKO Logged by: **Jerald Ancheta**

of Samples: 12

Samples Checked by: **Jerico Bolotano**

Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		4.9°C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cl Test Strip Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Anti-added

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerald Ancheta

Date: 10/9/2023

Work Orders: 3J09041

Report Date: 10/27/2023

Project: COSM 97-005

Received Date: 10/05/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

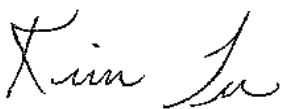
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/05/23 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
10/27/2023 16:14

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV15-S10	Client	3J09041-01	Water	10/04/23 16:00	
PT-UV15-S10D	Client	3J09041-02	Water	10/04/23 16:00	
PT-UV14-S10	Client	3J09041-03	Water	10/04/23 15:25	
PT-UV14-S10D	Client	3J09041-04	Water	10/04/23 15:25	
PT-UV20-S10	Client	3J09041-05	Water	10/04/23 14:50	
PT-UV20-S10D	Client	3J09041-06	Water	10/04/23 14:50	
PT-UV18-S10	Client	3J09041-07	Water	10/04/23 14:20	
PT-UV18-S10D	Client	3J09041-08	Water	10/04/23 14:20	
PT-UV7-S10	Client	3J09041-09	Water	10/04/23 08:50	
PT-UV7-S10D	Client	3J09041-10	Water	10/04/23 08:50	
PT-UV8-S10	Client	3J09041-11	Water	10/04/23 09:10	
PT-UV8-S10D	Client	3J09041-12	Water	10/04/23 09:10	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV15-S10
3J09041-01 (Water) Sampled: 10/04/23 16:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0936		Preparation: EPA 522/SPE			Prepared: 10/11/23 08:06		Analyst: mld
1,4-Dioxane	1.9	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	111%	Conc: 10.6	70-130			10/17/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B			Prepared: 10/13/23 07:48		Analyst: adm
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	0.51	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	ND	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV15-S10
3J09041-01 (Water) Sampled: 10/04/23 16:00 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	0.57	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	3.5	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	0.38	0.23	0.50	ug/l	1	10/15/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	1.3	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	3.5		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV15-S10
3J09041-01 (Water) Sampled: 10/04/23 16:00 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1179 **Preparation:** EPA 5030B **Prepared:** 10/13/23 07:48 **Analyst:** adm

trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	0.65	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	85%	Conc: 42.4	70-130			10/15/23	
4-Bromofluorobenzene	86%	Conc: 42.9	70-130			10/15/23	

Sample Results

(Continued)

Sample: PT-UV15-S10D
3J09041-02 (Water) Sampled: 10/04/23 16:00 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0936 **Preparation:** EPA 522/SPE **Prepared:** 10/11/23 08:06 **Analyst:** mld

1,4-Dioxane	1.2	0.028	0.070	ug/l	1	10/17/23	
-------------	-----	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	89%	Conc: 9.16	70-130			10/17/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV14-S10
3J09041-03 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0936		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:06		Analyst: mld	
1,4-Dioxane	2.5	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	111%	Conc: 10.7	70-130			10/17/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	0.50	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	4.6	3.1	5.0	ug/l	1	10/15/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV14-S10
3J09041-03 (Water) Sampled: 10/04/23 15:25 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	0.58	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	3.6	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	0.71	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	1.3	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	3.6		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV14-S10
3J09041-03 (Water) Sampled: 10/04/23 15:25 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2	Instr: GCMS08						
Batch ID: W3J1179	Preparation: EPA 5030B	Prepared: 10/13/23 07:48	Analyst: adm				
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	0.61	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 44.1	70-130	10/15/23
4-Bromofluorobenzene	90%	Conc: 45.1	70-130	10/15/23

Sample Results

(Continued)

Sample: PT-UV14-S10D
3J09041-04 (Water) Sampled: 10/04/23 15:25 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522	Instr: GCMS20						
Batch ID: W3J0936	Preparation: EPA 522/SPE	Prepared: 10/11/23 08:06	Analyst: mld				
1,4-Dioxane	2.2	0.028	0.070	ug/l	1	10/17/23	

Surrogate(s)

1,4-Dioxane-d8	109%	Conc: 10.5	70-130	10/17/23
----------------	------	------------	--------	----------

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV20-S10
3J09041-05 (Water) Sampled: 10/04/23 14:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0936		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:06		Analyst: mld	
1,4-Dioxane	0.34	0.028	0.070	ug/l	1	10/17/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	99%	Conc: 9.46	70-130			10/17/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	0.39	0.27	0.50	ug/l	1	10/15/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	3.7	3.1	5.0	ug/l	1	10/15/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV20-S10
3J09041-05 (Water) Sampled: 10/04/23 14:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	0.57	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	3.2	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	0.82	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	3.2		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV20-S10
3J09041-05 (Water) Sampled: 10/04/23 14:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1179 **Preparation:** EPA 5030B **Prepared:** 10/13/23 07:48 **Analyst:** adm

trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	87%	Conc: 43.3	70-130			10/15/23	
4-Bromofluorobenzene	88%	Conc: 44.0	70-130			10/15/23	

Sample Results

(Continued)

Sample: PT-UV20-S10D
3J09041-06 (Water) Sampled: 10/04/23 14:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J0936 **Preparation:** EPA 522/SPE **Prepared:** 10/11/23 08:06 **Analyst:** mld

1,4-Dioxane	0.34	0.028	0.070	ug/l	1	10/17/23	
-------------	------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	112%	Conc: 11.1	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV18-S10
3J09041-07 (Water) Sampled: 10/04/23 14:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0936		Preparation: EPA 522/SPE			Prepared: 10/11/23 08:06		Analyst: mld
1,4-Dioxane	0.14	0.028	0.070	ug/l	1	10/17/23	
Surrogate(s)							
1,4-Dioxane-d8	119%	Conc: 11.7	70-130			10/17/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B			Prepared: 10/13/23 07:48		Analyst: adm
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	0.38	0.27	0.50	ug/l	1	10/15/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	22	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV18-S10
3J09041-07 (Water) Sampled: 10/04/23 14:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	0.58	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	3.4	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	0.54	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	3.4		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV18-S10
3J09041-07 (Water) Sampled: 10/04/23 14:20 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2	Instr: GCMS08						
Batch ID: W3J1179	Preparation: EPA 5030B	Prepared: 10/13/23 07:48	Analyst: adm				
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	87%	Conc: 43.4	70-130	10/15/23
4-Bromofluorobenzene	90%	Conc: 44.9	70-130	10/15/23

Sample Results

(Continued)

Sample: PT-UV18-S10D
3J09041-08 (Water) Sampled: 10/04/23 14:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522	Instr: GCMS20						
Batch ID: W3J0936	Preparation: EPA 522/SPE	Prepared: 10/11/23 08:06	Analyst: mld				
1,4-Dioxane	0.16	0.028	0.070	ug/l	1	10/17/23	

Surrogate(s)

1,4-Dioxane-d8	110%	Conc: 10.6	70-130	10/17/23
----------------	------	------------	--------	----------

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV7-S10
3J09041-09 (Water) Sampled: 10/04/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W3J0936		Preparation: EPA 522/SPE		Prepared: 10/11/23 08:06		Analyst: mld	
1,4-Dioxane	1.6	0.028	0.070	ug/l	1	10/18/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	124%	Conc: 12.2	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	0.50	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	ND	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV7-S10
3J09041-09 (Water) Sampled: 10/04/23 8:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	0.73	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	4.0	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	0.30	0.23	0.50	ug/l	1	10/15/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	0.88	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	4.0		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV7-S10
3J09041-09 (Water) Sampled: 10/04/23 8:50 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	0.45	0.18	0.50	ug/l	1	10/15/23	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	90%	Conc: 45.0	70-130			10/15/23	
4-Bromofluorobenzene	90%	Conc: 45.2	70-130			10/15/23	

Sample Results

(Continued)

Sample: PT-UV7-S10D
3J09041-10 (Water) Sampled: 10/04/23 8:50 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J0936

Preparation: EPA 522/SPE

Prepared: 10/11/23 08:06

Analyst: mld

1,4-Dioxane	1.5	0.028	0.070	ug/l	1	10/18/23	
--------------------	------------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	117%	Conc: 11.3	70-130			10/18/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S10
3J09041-11 (Water) Sampled: 10/04/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0936		Preparation: EPA 522/SPE			Prepared: 10/11/23 08:06		Analyst: mld
1,4-Dioxane	1.7	0.028	0.070	ug/l	1	10/18/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	115%	Conc: 11.1	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B			Prepared: 10/13/23 07:48		Analyst: adm
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	0.51	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	3.5	3.1	5.0	ug/l	1	10/15/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S10
3J09041-11 (Water) Sampled: 10/04/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	0.68	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	4.0	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	0.42	0.23	0.50	ug/l	1	10/15/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	1.1	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	4.0		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 10/27/2023 16:14

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV8-S10
 3J09041-11 (Water) Sampled: 10/04/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	0.52	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	87%	Conc: 43.6	70-130			10/15/23	
4-Bromofluorobenzene	88%	Conc: 44.1	70-130			10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S10D
3J09041-12 (Water) Sampled: 10/04/23 9:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J0936		Preparation: EPA 522/SPE			Prepared: 10/11/23 08:06		Analyst: mld
1,4-Dioxane	1.5	0.028	0.070	ug/l	1	10/18/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	114%	Conc: 11.4	70-130			10/18/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B			Prepared: 10/13/23 07:48		Analyst: adm
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	0.44	0.27	0.50	ug/l	1	10/15/23	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	3.3	3.1	5.0	ug/l	1	10/15/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV8-S10D
3J09041-12 (Water) Sampled: 10/04/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	0.61	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	3.6	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	0.30	0.23	0.50	ug/l	1	10/15/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	0.94	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	3.6		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:14

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV8-S10D
3J09041-12 (Water) Sampled: 10/04/23 9:10 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	0.51	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 42.0	70-130			10/15/23	
4-Bromofluorobenzene	87%	Conc: 43.5	70-130			10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J0936 - EPA 522											
Blank (W3J0936-BLK1)											
Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.58			ug/l	10.0		96	70-130			
LCS (W3J0936-BS1)											
Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	0.289	0.028	0.070	ug/l	0.400		72	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.69			ug/l	10.0		87	70-130			
LCS Dup (W3J0936-BSD1)											
Prepared: 10/11/23 Analyzed: 10/17/23											
1,4-Dioxane	0.307	0.028	0.070	ug/l	0.400		77	70-130	6	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.82			ug/l	10.0		88	70-130			

Quality Control Results

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2											
Blank (W3J1179-BLK1)											
Prepared: 10/13/23 Analyzed: 10/15/23											
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
Blank (W3J1179-BLK1)					Prepared: 10/13/23 Analyzed: 10/15/23						
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
Blank (W3J1179-BLK1)											
Prepared: 10/13/23 Analyzed: 10/15/23											
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	45.6			ug/l	50.0		91	70-130			
LCS (W3J1179-BS1)											
Prepared: 10/13/23 Analyzed: 10/15/23											
1,1,1,2-Tetrachloroethane	4.91	0.24	0.50	ug/l	5.00		98	70-130			
1,1,1-Trichloroethane	4.72	0.26	0.50	ug/l	5.00		94	70-130			
1,1,2,2-Tetrachloroethane	4.70	0.20	0.50	ug/l	5.00		94	70-130			
1,1,2-Trichloroethane	4.75	0.19	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethane	4.76	0.27	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethene	4.09	0.16	0.50	ug/l	5.00		82	70-130			
1,1-Dichloropropene	4.29	0.14	0.50	ug/l	5.00		86	70-130			
1,2,3-Trichlorobenzene	4.86	0.40	0.50	ug/l	5.00		97	70-130			
1,2,3-Trichloropropane	4.83	0.22	0.50	ug/l	5.00		97	70-130			
1,2,4-Trichlorobenzene	5.10	0.17	0.50	ug/l	5.00		102	70-130			
1,2,4-Trimethylbenzene	4.69	0.20	0.50	ug/l	5.00		94	70-130			
1,2-Dichloroethane	4.68	0.24	0.50	ug/l	5.00		94	70-130			
1,2-Dichloropropane	4.75	0.13	0.50	ug/l	5.00		95	70-130			
1,3,5-Trimethylbenzene	4.61	0.17	0.50	ug/l	5.00		92	70-130			
1,3-Dichloropropane	4.99	0.27	0.50	ug/l	5.00		100	70-130			
2,2-Dichloropropane	4.91	0.17	0.50	ug/l	5.00		98	70-130			
2-Butanone	4.49	1.5	5.0	ug/l	5.00		90	70-130			J
2-Chlorotoluene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
2-Hexanone	4.91	1.2	5.0	ug/l	5.00		98	70-130			J
4-Chlorotoluene	4.64	0.15	0.50	ug/l	5.00		93	70-130			
4-Methyl-2-pentanone	4.70	1.8	5.0	ug/l	5.00		94	70-130			J
Acetone	41.8	3.1	5.0	ug/l	50.0		84	70-130			
Benzene	4.63	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromochloromethane	5.04	0.15	0.50	ug/l	5.00		101	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS (W3J1179-BS1)											
					Prepared: 10/13/23 Analyzed: 10/15/23						
Bromodichloromethane	4.61	0.24	0.50	ug/l	5.00		92	70-130			
Bromoform	4.71	0.38	0.50	ug/l	5.00		94	70-130			
Bromomethane	4.86	0.27	0.50	ug/l	5.00		97	70-130			
Carbon Disulfide	3.68	0.25	0.50	ug/l	5.00		74	70-130			
Carbon tetrachloride	4.48	0.27	0.50	ug/l	5.00		90	70-130			
Chlorobenzene	4.79	0.15	0.50	ug/l	5.00		96	70-130			
Chloroethane	5.07	0.17	0.50	ug/l	5.00		101	70-130			
Chloroform	5.07	0.27	0.50	ug/l	5.00		101	70-130			
Chloromethane	4.29	0.23	0.50	ug/l	5.00		86	70-130			
cis-1,2-Dichloroethene	4.77	0.25	0.50	ug/l	5.00		95	70-130			
cis-1,3-Dichloropropene	4.59	0.30	0.50	ug/l	5.00		92	70-130			
Dibromochloromethane	4.84	0.20	0.50	ug/l	5.00		97	70-130			
Dibromomethane	4.67	0.20	0.50	ug/l	5.00		93	70-130			
Dichlorodifluoromethane (Freon 12)	3.97	0.45	0.50	ug/l	5.00		79	70-130			
Di-isopropyl ether	20.7	1.1	2.0	ug/l	20.0		103	70-130			
Ethyl tert-butyl ether	20.3	1.0	2.0	ug/l	20.0		101	70-130			
Ethylbenzene	4.24	0.21	0.50	ug/l	5.00		85	70-130			
Freon 113	4.14	1.5	5.0	ug/l	5.00		83	70-130			J
Hexachlorobutadiene	5.07	0.40	0.50	ug/l	5.00		101	70-130			
Isopropylbenzene	4.22	0.18	0.50	ug/l	5.00		84	70-130			
m,p-Xylene	4.44	0.33	0.50	ug/l	5.00		89	70-130			
m-Dichlorobenzene	5.16	0.14	0.50	ug/l	5.00		103	70-130			
Methyl tert-butyl ether (MTBE)	19.8	0.94	2.0	ug/l	20.0		99	70-130			
Methylene chloride	5.28	0.30	0.50	ug/l	5.00		106	70-130			
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99	70-130			
n-Butylbenzene	4.60	0.29	0.50	ug/l	5.00		92	70-130			
n-Propylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130			
o-Dichlorobenzene	4.92	0.19	0.50	ug/l	5.00		98	70-130			
o-Xylene	4.69	0.20	0.50	ug/l	5.00		94	70-130			
p-Dichlorobenzene	5.18	0.18	0.50	ug/l	5.00		104	70-130			
p-Isopropyltoluene	4.64	0.25	0.50	ug/l	5.00		93	70-130			
sec-Butylbenzene	4.51	0.24	0.50	ug/l	5.00		90	70-130			
Styrene	4.56	0.19	0.50	ug/l	5.00		91	70-130			
Tert-amyl methyl ether	19.6	0.59	2.0	ug/l	20.0		98	70-130			
tert-Butylbenzene	4.37	0.18	0.50	ug/l	5.00		87	70-130			
Tetrachloroethene	4.66	0.18	0.50	ug/l	5.00		93	70-130			
Toluene	4.36	0.29	0.50	ug/l	5.00		87	70-130			
trans-1,2-Dichloroethene	4.78	0.26	0.50	ug/l	5.00		96	70-130			
trans-1,3-Dichloropropene	5.00	0.32	0.50	ug/l	5.00		100	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS (W3J1179-BS1)						Prepared: 10/13/23 Analyzed: 10/15/23					
Trichloroethene	4.26	0.18	0.50	ug/l	5.00		85	70-130			
Trichlorofluoromethane	5.18	0.18	0.50	ug/l	5.00		104	70-130			
Vinyl chloride	4.50	0.18	0.50	ug/l	5.00		90	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.7			ug/l	50.0		107	70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104	70-130			
LCS Dup (W3J1179-BSD1)						Prepared: 10/13/23 Analyzed: 10/15/23					
1,1,1,2-Tetrachloroethane	4.80	0.24	0.50	ug/l	5.00		96	70-130	2	30	
1,1,1-Trichloroethane	4.07	0.26	0.50	ug/l	5.00		81	70-130	15	30	
1,1,2,2-Tetrachloroethane	4.67	0.20	0.50	ug/l	5.00		93	70-130	0.7	30	
1,1,2-Trichloroethane	4.59	0.19	0.50	ug/l	5.00		92	70-130	3	30	
1,1-Dichloroethane	4.86	0.27	0.50	ug/l	5.00		97	70-130	2	30	
1,1-Dichloroethene	3.78	0.16	0.50	ug/l	5.00		76	70-130	8	30	
1,1-Dichloropropene	3.90	0.14	0.50	ug/l	5.00		78	70-130	10	30	
1,2,3-Trichlorobenzene	4.67	0.40	0.50	ug/l	5.00		93	70-130	4	30	
1,2,3-Trichloropropane	4.80	0.22	0.50	ug/l	5.00		96	70-130	0.8	30	
1,2,4-Trichlorobenzene	4.89	0.17	0.50	ug/l	5.00		98	70-130	4	30	
1,2,4-Trimethylbenzene	4.44	0.20	0.50	ug/l	5.00		89	70-130	5	30	
1,2-Dichloroethane	4.61	0.24	0.50	ug/l	5.00		92	70-130	2	30	
1,2-Dichloropropane	4.59	0.13	0.50	ug/l	5.00		92	70-130	3	30	
1,3,5-Trimethylbenzene	4.29	0.17	0.50	ug/l	5.00		86	70-130	7	30	
1,3-Dichloropropane	4.81	0.27	0.50	ug/l	5.00		96	70-130	4	30	
2,2-Dichloropropane	4.72	0.17	0.50	ug/l	5.00		94	70-130	4	30	
2-Butanone	4.45	1.5	5.0	ug/l	5.00		89	70-130	1	30	J
2-Chlorotoluene	4.43	0.15	0.50	ug/l	5.00		89	70-130	5	30	
2-Hexanone	4.70	1.2	5.0	ug/l	5.00		94	70-130	4	30	J
4-Chlorotoluene	4.44	0.15	0.50	ug/l	5.00		89	70-130	4	30	
4-Methyl-2-pentanone	4.55	1.8	5.0	ug/l	5.00		91	70-130	3	30	J
Acetone	42.0	3.1	5.0	ug/l	50.0		84	70-130	0.6	30	
Benzene	4.40	0.15	0.50	ug/l	5.00		88	70-130	5	30	
Bromobenzene	4.86	0.15	0.50	ug/l	5.00		97	70-130	0.08	30	
Bromochloromethane	5.05	0.15	0.50	ug/l	5.00		101	70-130	0.2	30	
Bromodichloromethane	4.48	0.24	0.50	ug/l	5.00		90	70-130	3	30	
Bromoform	4.67	0.38	0.50	ug/l	5.00		93	70-130	1	30	
Bromomethane	4.67	0.27	0.50	ug/l	5.00		93	70-130	4	30	
Carbon Disulfide	3.32	0.25	0.50	ug/l	5.00		66	70-130	10	30	Q-ME
Carbon tetrachloride	4.04	0.27	0.50	ug/l	5.00		81	70-130	10	30	
Chlorobenzene	4.63	0.15	0.50	ug/l	5.00		93	70-130	3	30	
Chloroethane	4.52	0.17	0.50	ug/l	5.00		90	70-130	11	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:14

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS Dup (W3J1179-BSD1)											
						Prepared: 10/13/23 Analyzed: 10/15/23					
Chloroform	4.93	0.27	0.50	ug/l	5.00		99	70-130	3	30	
Chloromethane	4.22	0.23	0.50	ug/l	5.00		84	70-130	2	30	
cis-1,2-Dichloroethene	4.70	0.25	0.50	ug/l	5.00		94	70-130	2	30	
cis-1,3-Dichloropropene	4.46	0.30	0.50	ug/l	5.00		89	70-130	3	30	
Dibromochloromethane	4.75	0.20	0.50	ug/l	5.00		95	70-130	2	30	
Dibromomethane	4.60	0.20	0.50	ug/l	5.00		92	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	3.78	0.45	0.50	ug/l	5.00		76	70-130	5	30	
Di-isopropyl ether	19.9	1.1	2.0	ug/l	20.0		99	70-130	4	30	
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100	70-130	1	30	
Ethylbenzene	3.85	0.21	0.50	ug/l	5.00		77	70-130	10	30	
Freon 113	3.56	1.5	5.0	ug/l	5.00		71	70-130	15	30	J
Hexachlorobutadiene	4.75	0.40	0.50	ug/l	5.00		95	70-130	7	30	
Isopropylbenzene	3.86	0.18	0.50	ug/l	5.00		77	70-130	9	30	
m,p-Xylene	4.15	0.33	0.50	ug/l	5.00		83	70-130	7	30	
m-Dichlorobenzene	5.00	0.14	0.50	ug/l	5.00		100	70-130	3	30	
Methyl tert-butyl ether (MTBE)	15.1	0.94	2.0	ug/l	20.0		75	70-130	27	30	
Methylene chloride	3.83	0.30	0.50	ug/l	5.00		77	70-130	32	30	Q-12
Naphthalene	5.14	0.35	0.50	ug/l	5.00		103	70-130	4	30	
n-Butylbenzene	4.25	0.29	0.50	ug/l	5.00		85	70-130	8	30	
n-Propylbenzene	4.24	0.18	0.50	ug/l	5.00		85	70-130	8	30	
o-Dichlorobenzene	4.83	0.19	0.50	ug/l	5.00		97	70-130	2	30	
o-Xylene	4.46	0.20	0.50	ug/l	5.00		89	70-130	5	30	
p-Dichlorobenzene	5.03	0.18	0.50	ug/l	5.00		101	70-130	3	30	
p-Isopropyltoluene	4.27	0.25	0.50	ug/l	5.00		85	70-130	8	30	
sec-Butylbenzene	4.09	0.24	0.50	ug/l	5.00		82	70-130	10	30	
Styrene	4.38	0.19	0.50	ug/l	5.00		88	70-130	4	30	
Tert-amyl methyl ether	19.1	0.59	2.0	ug/l	20.0		96	70-130	3	30	
tert-Butylbenzene	3.99	0.18	0.50	ug/l	5.00		80	70-130	9	30	
Tetrachloroethene	4.27	0.18	0.50	ug/l	5.00		85	70-130	9	30	
Toluene	4.13	0.29	0.50	ug/l	5.00		83	70-130	6	30	
trans-1,2-Dichloroethene	3.60	0.26	0.50	ug/l	5.00		72	70-130	28	30	
trans-1,3-Dichloropropene	4.85	0.32	0.50	ug/l	5.00		97	70-130	3	30	
Trichloroethene	3.91	0.18	0.50	ug/l	5.00		78	70-130	9	30	
Trichlorofluoromethane	4.29	0.18	0.50	ug/l	5.00		86	70-130	19	30	
Vinyl chloride	4.21	0.18	0.50	ug/l	5.00		84	70-130	7	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.2			ug/l	50.0		108	70-130			
4-Bromofluorobenzene	52.7			ug/l	50.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/27/2023 16:14

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
Q-ME	Acceptable QC with marginal exceedance
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Sample Receipt Checklist

Weck WKO: **3109041**

Date/Time Received: **10/05/23 16:14**

WKO Logged by: **Jaime Gomez**

of Samples: **12**

Samples Checked by: **Jaime Gomez**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ice Type (Blue/Wet)				4.9 °C
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about receipt info?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT				pH paper Lot# 3082367
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9				CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Jaime Gomez*

Date: **10/09/23**

Work Orders: 3J09137

Report Date: 10/22/2023

Project: COSM 97-005

Received Date: 10/09/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

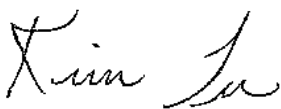
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/09/23 with the Chain-of-Custody document. The samples were received in good condition, at 7.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

FINAL REPORT

Reported:
10/22/2023 13:45

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-GS11-S4	Client	3J09137-01	Water	10/05/23 15:20	
PT-GS11-S8	Client	3J09137-02	Water	10/05/23 15:20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/22/2023 13:45

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-GS11-S4
 3J09137-01 (Water) Sampled: 10/05/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1301		Preparation: EPA 200.2		Prepared: 10/16/23 10:15		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/18/23	
Iron, Total	0.030	0.0065	0.030	mg/l	1	10/18/23	J
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/18/23	
Manganese, Total	0.0096	0.00083	0.0050	mg/l	1	10/18/23	

Sample Results

Sample: PT-GS11-S8
 3J09137-02 (Water) Sampled: 10/05/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.7			Instr: ICP03				
Batch ID: W3J1301		Preparation: EPA 200.2		Prepared: 10/16/23 10:15		Analyst: kvm	
Iron, Dissolved	ND	5.0	30	ug/l	1	10/18/23	
Iron, Total	ND	0.0065	0.030	mg/l	1	10/18/23	
Manganese, Dissolved	ND	2.7	5.0	ug/l	1	10/18/23	
Manganese, Total	ND	0.00083	0.0050	mg/l	1	10/18/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/22/2023 13:45

Project Manager: Brown & Caldwell

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1301 - EPA 200.7											
Blank (W3J1301-BLK1)					Prepared: 10/16/23 Analyzed: 10/18/23						
Iron, Dissolved	ND	5.0	30	ug/l							
Iron, Total	ND	0.0065	0.030	mg/l							
Manganese, Dissolved	ND	2.7	5.0	ug/l							
Manganese, Total	ND	0.00083	0.0050	mg/l							
LCS (W3J1301-BS1)					Prepared: 10/16/23 Analyzed: 10/18/23						
Iron, Dissolved	224	5.0	30	ug/l	200		112	85-115			
Iron, Total	0.224	0.0065	0.030	mg/l	0.200		112	85-115			
Manganese, Dissolved	201	2.7	5.0	ug/l	200		101	85-115			
Manganese, Total	0.201	0.00083	0.0050	mg/l	0.200		101	85-115			
Matrix Spike (W3J1301-MS1)					Source: 3J09034-01 Prepared: 10/16/23 Analyzed: 10/18/23						
Iron, Total	0.316	0.0065	0.030	mg/l	0.200	0.0888	114	70-130			
Manganese, Dissolved	210	2.7	5.0	ug/l	200	4.11	103	70-130			
Manganese, Total	0.210	0.00083	0.0050	mg/l	0.200	0.00814	101	70-130			
Matrix Spike (W3J1301-MS2)					Source: 3J09137-01 Prepared: 10/16/23 Analyzed: 10/18/23						
Iron, Dissolved	252	5.0	30	ug/l	200	ND	126	70-130			
Iron, Total	0.252	0.0065	0.030	mg/l	0.200	0.0297	111	70-130			
Manganese, Dissolved	212	2.7	5.0	ug/l	200	ND	106	70-130			
Manganese, Total	0.212	0.00083	0.0050	mg/l	0.200	0.00955	101	70-130			
Matrix Spike Dup (W3J1301-MSD1)					Source: 3J09034-01 Prepared: 10/16/23 Analyzed: 10/18/23						
Iron, Total	0.308	0.0065	0.030	mg/l	0.200	0.0888	109	70-130	3	30	
Manganese, Dissolved	207	2.7	5.0	ug/l	200	4.11	102	70-130	1	30	
Manganese, Total	0.207	0.00083	0.0050	mg/l	0.200	0.00814	100	70-130	1	30	
Matrix Spike Dup (W3J1301-MSD2)					Source: 3J09137-01 Prepared: 10/16/23 Analyzed: 10/18/23						
Iron, Dissolved	253	5.0	30	ug/l	200	ND	126	70-130	0.3	30	
Iron, Total	0.253	0.0065	0.030	mg/l	0.200	0.0297	112	70-130	0.3	30	
Manganese, Dissolved	213	2.7	5.0	ug/l	200	ND	106	70-130	0.4	30	
Manganese, Total	0.213	0.00083	0.0050	mg/l	0.200	0.00955	102	70-130	0.4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/22/2023 13:45

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3009137**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved				<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input checked="" type="checkbox"/> 10 - 15 Business Days <input checked="" type="checkbox"/> QA/QC Data Package
PROJECT MANAGER Chris Kindie		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com							

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	200.7 Fe, Total and Dissolved	200.8 Mn, Total and Dissolved												COMMENTS
	10/05/23	14:35	G	PT-GS10-S4 #	2	X	X												# did not receive the bottles - what is 10/1/23
	10/05/23	14:35	G	PT-GS10-S8 *	2	X	X												
	10/05/23	15:20	G	PT-GS11-S4	2	X	X												
	10/05/23	15:20	G	PT-GS11-S8	2	X	X												
																		Analyze both Fe and Mn by EPA 200.7	

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/9/23 8:40	RECEIVED BY <i>[Signature]</i>	10/9/23 8:40	SAMPLE CONDITION: Actual Temperature: 7.0 <input type="checkbox"/> Received On Ice <input type="checkbox"/> Preserved <input type="checkbox"/> Evidence Seals Present <input type="checkbox"/> Container Attacked <input type="checkbox"/> Preserved at Lab <i>[Signature]</i>	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/9/23 10:30	RECEIVED BY <i>[Signature]</i>	10/9/23 10:30		
RELINQUISHED BY	DATE / TIME	RECEIVED BY			

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **3109137**
 WKO Logged by: Jerald Ancheta
 Samples Checked by: Jerico Bolotano

Date/Time Received: 10/9/2023 10:30
 # of Samples: 2
 Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		7.8°C		
Samples received on Ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		Wet		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# pH Reading: Acid Lot# Amt added:
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cl Test Strip Lot#
OR&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for OR&G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading: Acid Lot# Amt added:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerald Ancheta

Date: 10/9/2023

Work Orders: 3J09143

Project: COSM 97-005

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 10/27/2023

Received Date: 10/09/2023

Turnaround Time: 5 workdays

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

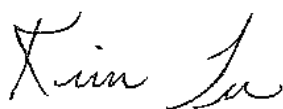
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/09/23 with the Chain-of-Custody document. The samples were received in good condition, at 7.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Certificate of Analysis

FINAL REPORT

Project Number: COSM 97-005

Reported:

10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV10-S9	Client	3J09143-01	Water	10/05/23 14:35	
PT-UV10-S9D	Client	3J09143-02	Water	10/05/23 14:35	
PT-UV10-S10	Client	3J09143-03	Water	10/05/23 14:35	
PT-UV10-S10D	Client	3J09143-04	Water	10/05/23 14:35	
PT-UV11-S9	Client	3J09143-05	Water	10/05/23 15:20	
PT-UV11-S9D	Client	3J09143-06	Water	10/05/23 15:20	
PT-UV11-S10	Client	3J09143-07	Water	10/05/23 15:20	
PT-UV11-S10D	Client	3J09143-08	Water	10/05/23 15:20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV10-S9
3J09143-01 (Water) Sampled: 10/05/23 14:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	ND	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	1.1	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV10-S9
3J09143-01 (Water) Sampled: 10/05/23 14:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Chloromethane	0.58	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	28	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	1.1		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	2.0	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV10-S9
3J09143-01 (Water) Sampled: 10/05/23 14:35 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1179 **Preparation:** EPA 5030B **Prepared:** 10/13/23 07:48 **Analyst:** adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	91%	Conc: 45.7	70-130			10/15/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	93%	Conc: 46.4	70-130			10/15/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV10-S9
3J09143-01RE1 (Water) Sampled: 10/05/23 14:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1092 **Preparation:** EPA 522/SPE **Prepared:** 10/12/23 08:06 **Analyst:** mld

1,4-Dioxane	120	1.4	3.5	ug/l	50	10/17/23	M-06
-------------	-----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	100%	Conc: 9.88	70-130			10/17/23	
----------------	------	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: PT-UV10-S9D
3J09143-02RE1 (Water) Sampled: 10/05/23 14:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1092 **Preparation:** EPA 522/SPE **Prepared:** 10/12/23 08:06 **Analyst:** mld

1,4-Dioxane	120	1.4	3.5	ug/l	50	10/17/23	M-06
-------------	-----	-----	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	96%	Conc: 9.67	70-130			10/17/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV10-S10
3J09143-03 (Water) Sampled: 10/05/23 14:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J1092		Preparation: EPA 522/SPE		Prepared: 10/12/23 08:06		Analyst: mld	
1,4-Dioxane	0.16	0.028	0.070	ug/l	1	10/16/23	
Surrogate(s)							
1,4-Dioxane-d8	76%	Conc: 7.64	70-130			10/16/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	4.2	3.1	5.0	ug/l	1	10/15/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV10-S10
3J09143-03 (Water) Sampled: 10/05/23 14:35 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	0.91	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	0.26	0.18	0.50	ug/l	1	10/15/23	J
THMs, Total	0.91		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV10-S10
3J09143-03 (Water) Sampled: 10/05/23 14:35 by Client

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	86%	Conc: 42.8	70-130			10/15/23	
4-Bromofluorobenzene	87%	Conc: 43.6	70-130			10/15/23	

Sample Results

(Continued)

Sample: PT-UV10-S10D
3J09143-04 (Water) Sampled: 10/05/23 14:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J1092

Preparation: EPA 522/SPE

Prepared: 10/12/23 08:06

Analyst: mld

1,4-Dioxane	0.12	0.028	0.070	ug/l	1	10/16/23	
-------------	------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	82%	Conc: 8.24	70-130			10/16/23	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV11-S9
3J09143-05 (Water) Sampled: 10/05/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	ND	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	1.2	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV11-S9
3J09143-05 (Water) Sampled: 10/05/23 15:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Chloromethane	0.28	0.23	0.50	ug/l	1	10/15/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	26	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	1.2		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	1.6	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV11-S9
3J09143-05 (Water) Sampled: 10/05/23 15:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	95%	Conc: 47.3	70-130			10/15/23	
4-Bromofluorobenzene	92%	Conc: 46.2	70-130			10/15/23	

Sample Results

(Continued)

Sample: PT-UV11-S9
3J09143-05RE1 (Water) Sampled: 10/05/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J1092		Preparation: EPA 522/SPE		Prepared: 10/12/23 08:06		Analyst: mld	
1,4-Dioxane	150	1.4	3.5	ug/l	50	10/17/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	107%	Conc: 10.4	70-130			10/17/23	

Sample Results

(Continued)

Sample: PT-UV11-S9D
3J09143-06RE1 (Water) Sampled: 10/05/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J1092		Preparation: EPA 522/SPE		Prepared: 10/12/23 08:06		Analyst: mld	
1,4-Dioxane	120	1.4	3.5	ug/l	50	10/17/23	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	88%	Conc: 9.00	70-130			10/17/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV11-S10
3J09143-07 (Water) Sampled: 10/05/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W3J1092		Preparation: EPA 522/SPE		Prepared: 10/12/23 08:06		Analyst: mld	
1,4-Dioxane	0.17	0.028	0.070	ug/l	1	10/16/23	
Surrogate(s)							
1,4-Dioxane-d8	83%	Conc: 8.25	70-130			10/16/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	5.6	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV11-S10
3J09143-07 (Water) Sampled: 10/05/23 15:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	0.99	0.27	0.50	ug/l	1	10/15/23	
Chloromethane	ND	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	0.99		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-UV11-S10
3J09143-07 (Water) Sampled: 10/05/23 15:20 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1179 **Preparation:** EPA 5030B **Prepared:** 10/13/23 07:48 **Analyst:** adm

trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	
Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 44.0	70-130			10/15/23	
4-Bromofluorobenzene	90%	Conc: 44.8	70-130			10/15/23	

Sample Results

(Continued)

Sample: PT-UV11-S10D
3J09143-08 (Water) Sampled: 10/05/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1092 **Preparation:** EPA 522/SPE **Prepared:** 10/12/23 08:06 **Analyst:** mld

1,4-Dioxane	0.20	0.028	0.070	ug/l	1	10/16/23	
-------------	------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	109%	Conc: 11.0	70-130			10/16/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

10/27/2023 16:12

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1092 - EPA 522											
Blank (W3J1092-BLK1)						Prepared: 10/12/23 Analyzed: 10/16/23					
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.40			ug/l	10.0		74	70-130			
LCS (W3J1092-BS1)						Prepared: 10/12/23 Analyzed: 10/16/23					
1,4-Dioxane	0.0654	0.028	0.070	ug/l	0.0600		109	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.15			ug/l	10.0		91	70-130			
LCS Dup (W3J1092-BSD1)						Prepared: 10/12/23 Analyzed: 10/16/23					
1,4-Dioxane	0.0694	0.028	0.070	ug/l	0.0600		116	50-150	6	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.38			ug/l	10.0		94	70-130			

Quality Control Results

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2											
Blank (W3J1179-BLK1)						Prepared: 10/13/23 Analyzed: 10/15/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
Blank (W3J1179-BLK1)					Prepared: 10/13/23 Analyzed: 10/15/23						
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
Blank (W3J1179-BLK1)											
					Prepared: 10/13/23 Analyzed: 10/15/23						
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	45.6			ug/l	50.0		91	70-130			
LCS (W3J1179-BS1)											
					Prepared: 10/13/23 Analyzed: 10/15/23						
1,1,1,2-Tetrachloroethane	4.91	0.24	0.50	ug/l	5.00		98	70-130			
1,1,1-Trichloroethane	4.72	0.26	0.50	ug/l	5.00		94	70-130			
1,1,2,2-Tetrachloroethane	4.70	0.20	0.50	ug/l	5.00		94	70-130			
1,1,2-Trichloroethane	4.75	0.19	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethane	4.76	0.27	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethene	4.09	0.16	0.50	ug/l	5.00		82	70-130			
1,1-Dichloropropene	4.29	0.14	0.50	ug/l	5.00		86	70-130			
1,2,3-Trichlorobenzene	4.86	0.40	0.50	ug/l	5.00		97	70-130			
1,2,3-Trichloropropane	4.83	0.22	0.50	ug/l	5.00		97	70-130			
1,2,4-Trichlorobenzene	5.10	0.17	0.50	ug/l	5.00		102	70-130			
1,2,4-Trimethylbenzene	4.69	0.20	0.50	ug/l	5.00		94	70-130			
1,2-Dichloroethane	4.68	0.24	0.50	ug/l	5.00		94	70-130			
1,2-Dichloropropane	4.75	0.13	0.50	ug/l	5.00		95	70-130			
1,3,5-Trimethylbenzene	4.61	0.17	0.50	ug/l	5.00		92	70-130			
1,3-Dichloropropane	4.99	0.27	0.50	ug/l	5.00		100	70-130			
2,2-Dichloropropane	4.91	0.17	0.50	ug/l	5.00		98	70-130			
2-Butanone	4.49	1.5	5.0	ug/l	5.00		90	70-130			J
2-Chlorotoluene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
2-Hexanone	4.91	1.2	5.0	ug/l	5.00		98	70-130			J
4-Chlorotoluene	4.64	0.15	0.50	ug/l	5.00		93	70-130			
4-Methyl-2-pentanone	4.70	1.8	5.0	ug/l	5.00		94	70-130			J
Acetone	41.8	3.1	5.0	ug/l	50.0		84	70-130			
Benzene	4.63	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromochloromethane	5.04	0.15	0.50	ug/l	5.00		101	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS (W3J1179-BS1)					Prepared: 10/13/23 Analyzed: 10/15/23						
Bromodichloromethane	4.61	0.24	0.50	ug/l	5.00		92	70-130			
Bromoform	4.71	0.38	0.50	ug/l	5.00		94	70-130			
Bromomethane	4.86	0.27	0.50	ug/l	5.00		97	70-130			
Carbon Disulfide	3.68	0.25	0.50	ug/l	5.00		74	70-130			
Carbon tetrachloride	4.48	0.27	0.50	ug/l	5.00		90	70-130			
Chlorobenzene	4.79	0.15	0.50	ug/l	5.00		96	70-130			
Chloroethane	5.07	0.17	0.50	ug/l	5.00		101	70-130			
Chloroform	5.07	0.27	0.50	ug/l	5.00		101	70-130			
Chloromethane	4.29	0.23	0.50	ug/l	5.00		86	70-130			
cis-1,2-Dichloroethene	4.77	0.25	0.50	ug/l	5.00		95	70-130			
cis-1,3-Dichloropropene	4.59	0.30	0.50	ug/l	5.00		92	70-130			
Dibromochloromethane	4.84	0.20	0.50	ug/l	5.00		97	70-130			
Dibromomethane	4.67	0.20	0.50	ug/l	5.00		93	70-130			
Dichlorodifluoromethane (Freon 12)	3.97	0.45	0.50	ug/l	5.00		79	70-130			
Di-isopropyl ether	20.7	1.1	2.0	ug/l	20.0		103	70-130			
Ethyl tert-butyl ether	20.3	1.0	2.0	ug/l	20.0		101	70-130			
Ethylbenzene	4.24	0.21	0.50	ug/l	5.00		85	70-130			
Freon 113	4.14	1.5	5.0	ug/l	5.00		83	70-130			J
Hexachlorobutadiene	5.07	0.40	0.50	ug/l	5.00		101	70-130			
Isopropylbenzene	4.22	0.18	0.50	ug/l	5.00		84	70-130			
m,p-Xylene	4.44	0.33	0.50	ug/l	5.00		89	70-130			
m-Dichlorobenzene	5.16	0.14	0.50	ug/l	5.00		103	70-130			
Methyl tert-butyl ether (MTBE)	19.8	0.94	2.0	ug/l	20.0		99	70-130			
Methylene chloride	5.28	0.30	0.50	ug/l	5.00		106	70-130			
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99	70-130			
n-Butylbenzene	4.60	0.29	0.50	ug/l	5.00		92	70-130			
n-Propylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130			
o-Dichlorobenzene	4.92	0.19	0.50	ug/l	5.00		98	70-130			
o-Xylene	4.69	0.20	0.50	ug/l	5.00		94	70-130			
p-Dichlorobenzene	5.18	0.18	0.50	ug/l	5.00		104	70-130			
p-Isopropyltoluene	4.64	0.25	0.50	ug/l	5.00		93	70-130			
sec-Butylbenzene	4.51	0.24	0.50	ug/l	5.00		90	70-130			
Styrene	4.56	0.19	0.50	ug/l	5.00		91	70-130			
Tert-amyl methyl ether	19.6	0.59	2.0	ug/l	20.0		98	70-130			
tert-Butylbenzene	4.37	0.18	0.50	ug/l	5.00		87	70-130			
Tetrachloroethene	4.66	0.18	0.50	ug/l	5.00		93	70-130			
Toluene	4.36	0.29	0.50	ug/l	5.00		87	70-130			
trans-1,2-Dichloroethene	4.78	0.26	0.50	ug/l	5.00		96	70-130			
trans-1,3-Dichloropropene	5.00	0.32	0.50	ug/l	5.00		100	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS (W3J1179-BS1)						Prepared: 10/13/23 Analyzed: 10/15/23					
Trichloroethene	4.26	0.18	0.50	ug/l	5.00		85	70-130			
Trichlorofluoromethane	5.18	0.18	0.50	ug/l	5.00		104	70-130			
Vinyl chloride	4.50	0.18	0.50	ug/l	5.00		90	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	53.7			ug/l	50.0		107	70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104	70-130			
LCS Dup (W3J1179-BSD1)						Prepared: 10/13/23 Analyzed: 10/15/23					
1,1,1,2-Tetrachloroethane	4.80	0.24	0.50	ug/l	5.00		96	70-130	2	30	
1,1,1-Trichloroethane	4.07	0.26	0.50	ug/l	5.00		81	70-130	15	30	
1,1,2,2-Tetrachloroethane	4.67	0.20	0.50	ug/l	5.00		93	70-130	0.7	30	
1,1,2-Trichloroethane	4.59	0.19	0.50	ug/l	5.00		92	70-130	3	30	
1,1-Dichloroethane	4.86	0.27	0.50	ug/l	5.00		97	70-130	2	30	
1,1-Dichloroethene	3.78	0.16	0.50	ug/l	5.00		76	70-130	8	30	
1,1-Dichloropropene	3.90	0.14	0.50	ug/l	5.00		78	70-130	10	30	
1,2,3-Trichlorobenzene	4.67	0.40	0.50	ug/l	5.00		93	70-130	4	30	
1,2,3-Trichloropropane	4.80	0.22	0.50	ug/l	5.00		96	70-130	0.8	30	
1,2,4-Trichlorobenzene	4.89	0.17	0.50	ug/l	5.00		98	70-130	4	30	
1,2,4-Trimethylbenzene	4.44	0.20	0.50	ug/l	5.00		89	70-130	5	30	
1,2-Dichloroethane	4.61	0.24	0.50	ug/l	5.00		92	70-130	2	30	
1,2-Dichloropropane	4.59	0.13	0.50	ug/l	5.00		92	70-130	3	30	
1,3,5-Trimethylbenzene	4.29	0.17	0.50	ug/l	5.00		86	70-130	7	30	
1,3-Dichloropropane	4.81	0.27	0.50	ug/l	5.00		96	70-130	4	30	
2,2-Dichloropropane	4.72	0.17	0.50	ug/l	5.00		94	70-130	4	30	
2-Butanone	4.45	1.5	5.0	ug/l	5.00		89	70-130	1	30	J
2-Chlorotoluene	4.43	0.15	0.50	ug/l	5.00		89	70-130	5	30	
2-Hexanone	4.70	1.2	5.0	ug/l	5.00		94	70-130	4	30	J
4-Chlorotoluene	4.44	0.15	0.50	ug/l	5.00		89	70-130	4	30	
4-Methyl-2-pentanone	4.55	1.8	5.0	ug/l	5.00		91	70-130	3	30	J
Acetone	42.0	3.1	5.0	ug/l	50.0		84	70-130	0.6	30	
Benzene	4.40	0.15	0.50	ug/l	5.00		88	70-130	5	30	
Bromobenzene	4.86	0.15	0.50	ug/l	5.00		97	70-130	0.08	30	
Bromochloromethane	5.05	0.15	0.50	ug/l	5.00		101	70-130	0.2	30	
Bromodichloromethane	4.48	0.24	0.50	ug/l	5.00		90	70-130	3	30	
Bromoform	4.67	0.38	0.50	ug/l	5.00		93	70-130	1	30	
Bromomethane	4.67	0.27	0.50	ug/l	5.00		93	70-130	4	30	
Carbon Disulfide	3.32	0.25	0.50	ug/l	5.00		66	70-130	10	30	Q-ME
Carbon tetrachloride	4.04	0.27	0.50	ug/l	5.00		81	70-130	10	30	
Chlorobenzene	4.63	0.15	0.50	ug/l	5.00		93	70-130	3	30	
Chloroethane	4.52	0.17	0.50	ug/l	5.00		90	70-130	11	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
10/27/2023 16:12

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS Dup (W3J1179-BSD1)											
						Prepared: 10/13/23 Analyzed: 10/15/23					
Chloroform	4.93	0.27	0.50	ug/l	5.00		99	70-130	3	30	
Chloromethane	4.22	0.23	0.50	ug/l	5.00		84	70-130	2	30	
cis-1,2-Dichloroethene	4.70	0.25	0.50	ug/l	5.00		94	70-130	2	30	
cis-1,3-Dichloropropene	4.46	0.30	0.50	ug/l	5.00		89	70-130	3	30	
Dibromochloromethane	4.75	0.20	0.50	ug/l	5.00		95	70-130	2	30	
Dibromomethane	4.60	0.20	0.50	ug/l	5.00		92	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	3.78	0.45	0.50	ug/l	5.00		76	70-130	5	30	
Di-isopropyl ether	19.9	1.1	2.0	ug/l	20.0		99	70-130	4	30	
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100	70-130	1	30	
Ethylbenzene	3.85	0.21	0.50	ug/l	5.00		77	70-130	10	30	
Freon 113	3.56	1.5	5.0	ug/l	5.00		71	70-130	15	30	J
Hexachlorobutadiene	4.75	0.40	0.50	ug/l	5.00		95	70-130	7	30	
Isopropylbenzene	3.86	0.18	0.50	ug/l	5.00		77	70-130	9	30	
m,p-Xylene	4.15	0.33	0.50	ug/l	5.00		83	70-130	7	30	
m-Dichlorobenzene	5.00	0.14	0.50	ug/l	5.00		100	70-130	3	30	
Methyl tert-butyl ether (MTBE)	15.1	0.94	2.0	ug/l	20.0		75	70-130	27	30	
Methylene chloride	3.83	0.30	0.50	ug/l	5.00		77	70-130	32	30	Q-12
Naphthalene	5.14	0.35	0.50	ug/l	5.00		103	70-130	4	30	
n-Butylbenzene	4.25	0.29	0.50	ug/l	5.00		85	70-130	8	30	
n-Propylbenzene	4.24	0.18	0.50	ug/l	5.00		85	70-130	8	30	
o-Dichlorobenzene	4.83	0.19	0.50	ug/l	5.00		97	70-130	2	30	
o-Xylene	4.46	0.20	0.50	ug/l	5.00		89	70-130	5	30	
p-Dichlorobenzene	5.03	0.18	0.50	ug/l	5.00		101	70-130	3	30	
p-Isopropyltoluene	4.27	0.25	0.50	ug/l	5.00		85	70-130	8	30	
sec-Butylbenzene	4.09	0.24	0.50	ug/l	5.00		82	70-130	10	30	
Styrene	4.38	0.19	0.50	ug/l	5.00		88	70-130	4	30	
Tert-amyl methyl ether	19.1	0.59	2.0	ug/l	20.0		96	70-130	3	30	
tert-Butylbenzene	3.99	0.18	0.50	ug/l	5.00		80	70-130	9	30	
Tetrachloroethene	4.27	0.18	0.50	ug/l	5.00		85	70-130	9	30	
Toluene	4.13	0.29	0.50	ug/l	5.00		83	70-130	6	30	
trans-1,2-Dichloroethene	3.60	0.26	0.50	ug/l	5.00		72	70-130	28	30	
trans-1,3-Dichloropropene	4.85	0.32	0.50	ug/l	5.00		97	70-130	3	30	
Trichloroethene	3.91	0.18	0.50	ug/l	5.00		78	70-130	9	30	
Trichlorofluoromethane	4.29	0.18	0.50	ug/l	5.00		86	70-130	19	30	
Vinyl chloride	4.21	0.18	0.50	ug/l	5.00		84	70-130	7	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.2			ug/l	50.0		108	70-130			
4-Bromofluorobenzene	52.7			ug/l	50.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 10/27/2023 16:12

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
Q-ME	Acceptable QC with marginal exceedance
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **3009143** Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs				<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input checked="" type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package
PROJECT MANAGER Chris Kindie		SAMPLER invoice to Rose Ford, Rford@BrwnCald.com							

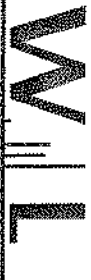
ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs													
	10/05/23	14:35	G	PT-UV10-S9	5	X	X													
	10/05/23	14:35	G	PT-UV10-S9D	2	X														
	10/05/23	14:35	G	PT-UV10-S10	5	X	X													
	10/05/23	14:35	G	PT-UV10-S10D	2	X														
	10/05/23	15:20	G	PT-UV11-S9	5	X	X													
	10/05/23	15:20	G	PT-UV11-S9D	2	X														
	10/05/23	15:20	G	PT-UV11-S10	5	X	X													
	10/05/23	15:20	G	PT-UV11-S10D	2	X														

RELINQUISHED BY 	DATE / TIME 10/9/23 8:40	RECEIVED BY 	10/9/23 08:40	SAMPLE CONDITION: Actual Temperature: 7.2 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY 	DATE / TIME 10/9/23 10:30	RECEIVED BY 	10/9/23 10:30		
RELINQUISHED BY 	DATE / TIME	RECEIVED BY			

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.

COC ve Page 22 of 23



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **3109143**

Date/Time Received: **10/9/2023 10:30**

WKO Logged by: **Jerald Anchetta**

of Samples: **8**

Samples Checked by: **Jerico Bolotano**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
------	-----	----	-----	----------

COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Project Manager notified about COC discrepancy?

Sample Temperature 7.8°C

Samples received on ice?

Ice Type (Blue/Wet) Wet

All samples intact?

Samples in proper containers?

Sufficient sample volume?

Samples intact?

Received within holding time?

Project Manager notified about receipt info?

Sample labels checked for correct preservation?

VOC Headspace: (No) none, If Yes (see comment)

524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT

pH verified upon receipt?

Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9

Free Chlorine Tested <0.1 (Organics Analyses)

OR&G pH <2 verified?

pH adjusted for OR&G

Project Manager notified about sample preservation?

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerald Anchetta

Date: 10/9/2023

Work Orders: 3J09145

Report Date: 11/06/2023

Project: COSM 97-005

Received Date: 10/09/2023

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

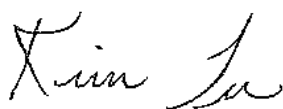
ELAP-CA #1132 • EPA-UCMR #CA00211 • LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 10/09/23 with the Chain-of-Custody document. The samples were received in good condition, at 7.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-UV10-S10	Client	3J09145-01	Water	10/05/23 14:35	
PT-UV11-S10	Client	3J09145-02	Water	10/05/23 15:20	
PT-GAC10-S23	Client	3J09145-03	Water	10/05/23 14:40	
PT-GAC10-S11	Client	3J09145-04	Water	10/05/23 14:40	
PT-GAC11-S23	Client	3J09145-05	Water	10/05/23 15:15	
PT-GAC11-S11	Client	3J09145-06	Water	10/05/23 15:15	
1,4-Dioxane, Field Blank	Client	3J09145-07	Water	10/05/23 15:30	
Trip Blank	Client	3J09145-08	Water	10/05/23 15:30	
PFOA, Field Blank	Client	3J09145-09	Water	10/05/23 15:30	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
EPA 537.1 in Water			
PFBS	375-73-5		✓
PFHxA	307-24-4		✓
HFPO-DA	13252-13-6		✓
PFHpA	375-85-9		✓
PFHxS	355-46-4		✓
ADONA	919005-14-4		✓
PFOA	335-67-1		✓
PFNA	375-95-1		✓
PFOS	1763-23-1		✓
9CI-PF3ONS	756426-58-1		✓
PFDA	335-76-2		✓
MeFOSAA	2355-31-9		✓
EtFOSAA	2991-50-6		✓
PFOA	2058-94-8		✓
11CI-PF3OUdS	763051-92-9		✓
PFDaA	307-55-1		✓
PFTTrDA	72629-94-8		✓
PFTeDA	376-06-7		✓
SRL 524M-TCP in Water			
1,2,3-Trichloropropane	96-18-4	✓	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-UV10-S10
3J09145-01 (Water) Sampled: 10/05/23 14:35 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12
Batch ID: W3J0923	Preparation: EPA 5030B
Prepared: 10/11/23 07:45	Analyst: ADM
1,2,3-Trichloropropane	ND 0.0012 0.0050 ug/l 1 10/13/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06
Batch ID: W3J1656	Preparation: EPA 537/SPE
Prepared: 10/19/23 08:20	Analyst: jna
11CI-PF3OUdS	ND 0.49 1.8 ng/l 1 10/24/23
9CI-PF3ONS	ND 0.47 1.8 ng/l 1 10/24/23
ADONA	ND 0.49 1.8 ng/l 1 10/24/23
EtFOSAA	ND 0.42 1.8 ng/l 1 10/24/23
HFPO-DA	ND 0.77 1.8 ng/l 1 10/24/23
MeFOSAA	ND 0.51 1.8 ng/l 1 10/24/23
PFBS	5.5 0.51 1.8 ng/l 1 10/24/23
PFDA	ND 0.40 1.8 ng/l 1 10/24/23
PFDoA	ND 0.58 1.8 ng/l 1 10/24/23
PFHpA	2.2 0.47 1.8 ng/l 1 10/24/23
PFHxA	11 0.43 1.8 ng/l 1 10/24/23
PFHxS	5.5 0.52 1.8 ng/l 1 10/24/23
PFNA	ND 0.46 1.8 ng/l 1 10/24/23
PFOA	4.3 0.59 1.8 ng/l 1 10/24/23
PFOS	ND 0.47 1.8 ng/l 1 10/24/23
PFTeDA	ND 0.40 1.8 ng/l 1 10/24/23
PFTTrDA	ND 0.37 1.8 ng/l 1 10/24/23
PFUnA	ND 0.42 1.8 ng/l 1 10/24/23

Surrogate(s)

13C2-PFDA	104%	Conc: 36.5	70-130	10/24/23
13C2-PFHxA	102%	Conc: 36.1	70-130	10/24/23
d5-EtFOSAA	112%	Conc: 158	70-130	10/24/23
HFPO-DA-13C3	99%	Conc: 34.8	70-130	10/24/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-UV11-S10
3J09145-02 (Water) Sampled: 10/05/23 15:20 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP	Instr: GCMS12
Batch ID: W3J0923	Preparation: EPA 5030B
Prepared: 10/11/23 07:45	Analyst: ADM
1,2,3-Trichloropropane	ND 0.0012 0.0050 ug/l 1 10/13/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1	Instr: LCMS06
Batch ID: W3J1656	Preparation: EPA 537/SPE
Prepared: 10/19/23 08:20	Analyst: jna
11CI-PF3OUdS	ND 0.49 1.7 ng/l 1 10/24/23
9CI-PF3ONS	ND 0.46 1.7 ng/l 1 10/24/23
ADONA	ND 0.48 1.7 ng/l 1 10/24/23
EtFOSAA	ND 0.42 1.7 ng/l 1 10/24/23
HFPO-DA	ND 0.76 1.7 ng/l 1 10/24/23
MeFOSAA	ND 0.50 1.7 ng/l 1 10/24/23
PFBS	5.0 0.50 1.7 ng/l 1 10/24/23
PFDA	ND 0.39 1.7 ng/l 1 10/24/23
PFDoA	ND 0.57 1.7 ng/l 1 10/24/23
PFHpA	2.1 0.47 1.7 ng/l 1 10/24/23
PFHxA	9.5 0.42 1.7 ng/l 1 10/24/23
PFHxS	5.1 0.52 1.7 ng/l 1 10/24/23
PFNA	ND 0.45 1.7 ng/l 1 10/24/23
PFOA	4.2 0.58 1.7 ng/l 1 10/24/23
PFOS	ND 0.46 1.7 ng/l 1 10/24/23
PFTeDA	ND 0.39 1.7 ng/l 1 10/24/23
PFTTrDA	ND 0.36 1.7 ng/l 1 10/24/23
PFUnA	ND 0.41 1.7 ng/l 1 10/24/23

Surrogate(s)

13C2-PFDA	102%	Conc: 35.7	70-130	10/24/23
13C2-PFHxA	91%	Conc: 31.6	70-130	10/24/23
d5-EtFOSAA	112%	Conc: 157	70-130	10/24/23
HFPO-DA-13C3	93%	Conc: 32.4	70-130	10/24/23

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC10-S23
3J09145-03 (Water) Sampled: 10/05/23 14:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J1092 **Prepared:** 10/12/23 08:06
Preparation: EPA 522/SPE **Analyst:** mld

1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/16/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	94%	Conc: 9.35	70-130			10/16/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0923 **Prepared:** 10/11/23 07:45
Preparation: EPA 5030B **Analyst:** ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/13/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1656 **Prepared:** 10/19/23 08:20
Preparation: EPA 537/SPE **Analyst:** jna

11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/24/23	
ADONA	ND	0.48	1.7	ng/l	1	10/24/23	
EtFOSAA	ND	0.41	1.7	ng/l	1	10/24/23	
HFPO-DA	ND	0.75	1.7	ng/l	1	10/24/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/24/23	
PFBS	ND	0.50	1.7	ng/l	1	10/24/23	
PFDA	ND	0.39	1.7	ng/l	1	10/24/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/24/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/24/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/24/23	
PFHxS	ND	0.51	1.7	ng/l	1	10/24/23	
PFNA	ND	0.45	1.7	ng/l	1	10/24/23	
PFOA	ND	0.58	1.7	ng/l	1	10/24/23	
PFOS	ND	0.46	1.7	ng/l	1	10/24/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/24/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/24/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/24/23	
<i>Surrogate(s)</i>							
13C2-PFDA	96%	Conc: 33.3	70-130			10/24/23	
13C2-PFHxA	103%	Conc: 35.6	70-130			10/24/23	
d5-EtFOSAA	106%	Conc: 146	70-130			10/24/23	
HFPO-DA-13C3	97%	Conc: 33.5	70-130			10/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1179 **Prepared:** 10/13/23 07:48
Preparation: EPA 5030B **Analyst:** adm

3J09145

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC10-S23
3J09145-03 (Water) Sampled: 10/05/23 14:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	ND	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC10-S23
3J09145-03 (Water) Sampled: 10/05/23 14:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Chloromethane	0.42	0.23	0.50	ug/l	1	10/15/23	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/06/2023 13:42

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC10-S23
 3J09145-03 (Water) Sampled: 10/05/23 14:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.4	70-130			10/15/23	
4-Bromofluorobenzene	86%	Conc: 43.1	70-130			10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC10-S11
3J09145-04 (Water) Sampled: 10/05/23 14:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W3J1092 **Preparation:** EPA 522/SPE **Prepared:** 10/12/23 08:06 **Analyst:** mld
 1,4-Dioxane ND 0.028 0.070 ug/l 1 10/16/23
Surrogate(s)
 1,4-Dioxane-d8 105% Conc: 10.6 70-130 10/16/23

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP **Instr:** GCMS12
Batch ID: W3J0923 **Preparation:** EPA 5030B **Prepared:** 10/11/23 07:45 **Analyst:** ADM
 1,2,3-Trichloropropane ND 0.0012 0.0050 ug/l 1 10/13/23

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1656 **Preparation:** EPA 537/SPE **Prepared:** 10/19/23 08:20 **Analyst:** jna

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	10/24/23	
ADONA	ND	0.46	1.7	ng/l	1	10/24/23	
EtFOSAA	ND	0.40	1.7	ng/l	1	10/24/23	
HFPO-DA	ND	0.73	1.7	ng/l	1	10/24/23	
MeFOSAA	ND	0.48	1.7	ng/l	1	10/24/23	
PFBS	ND	0.49	1.7	ng/l	1	10/24/23	
PFDA	ND	0.38	1.7	ng/l	1	10/24/23	
PFDaA	ND	0.55	1.7	ng/l	1	10/24/23	
PFHpA	ND	0.45	1.7	ng/l	1	10/24/23	
PFHxA	ND	0.41	1.7	ng/l	1	10/24/23	
PFHxS	ND	0.50	1.7	ng/l	1	10/24/23	
PFNA	ND	0.44	1.7	ng/l	1	10/24/23	
PFOA	ND	0.56	1.7	ng/l	1	10/24/23	
PFOS	ND	0.45	1.7	ng/l	1	10/24/23	
PFTeDA	ND	0.38	1.7	ng/l	1	10/24/23	
PFTTrDA	ND	0.35	1.7	ng/l	1	10/24/23	
PFUnA	ND	0.40	1.7	ng/l	1	10/24/23	
<i>Surrogate(s)</i>							
13C2-PFDA	103%	Conc: 34.7	70-130			10/24/23	
13C2-PFHxA	105%	Conc: 35.4	70-130			10/24/23	
d5-EtFOSAA	107%	Conc: 144	70-130			10/24/23	
HFPO-DA-13C3	104%	Conc: 35.0	70-130			10/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1179 **Preparation:** EPA 5030B **Prepared:** 10/13/23 07:48 **Analyst:** adm
 3J09145

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC10-S11
3J09145-04 (Water) Sampled: 10/05/23 14:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48			Analyst: adm
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	ND	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC10-S11
3J09145-04 (Water) Sampled: 10/05/23 14:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48			Analyst: adm
Chloromethane	ND	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC10-S11
 3J09145-04 (Water) Sampled: 10/05/23 14:40 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 43.8	70-130			10/15/23	
4-Bromofluorobenzene	88%	Conc: 44.2	70-130			10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC11-S23
3J09145-05 (Water) Sampled: 10/05/23 15:15 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W3J1092

Preparation: EPA 522/SPE

Prepared: 10/12/23 08:06

Analyst: mld

1,4-Dioxane	0.035	0.028	0.070	ug/l	1	10/16/23	J
-------------	-------	-------	-------	------	---	----------	---

Surrogate(s)

1,4-Dioxane-d8	110%	Conc: 10.5	70-130			10/16/23	
----------------	------	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W3J0923

Preparation: EPA 5030B

Prepared: 10/11/23 07:45

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/13/23	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W3J1656

Preparation: EPA 537/SPE

Prepared: 10/19/23 08:20

Analyst: jna

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	10/24/23	
ADONA	ND	0.49	1.8	ng/l	1	10/24/23	
EtFOSAA	ND	0.43	1.8	ng/l	1	10/24/23	
HFPO-DA	ND	0.77	1.8	ng/l	1	10/24/23	
MeFOSAA	ND	0.51	1.8	ng/l	1	10/24/23	
PFBS	ND	0.51	1.8	ng/l	1	10/24/23	
PFDA	ND	0.40	1.8	ng/l	1	10/24/23	
PFDaA	ND	0.58	1.8	ng/l	1	10/24/23	
PFHpA	ND	0.48	1.8	ng/l	1	10/24/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/24/23	
PFHxS	ND	0.53	1.8	ng/l	1	10/24/23	
PFNA	ND	0.46	1.8	ng/l	1	10/24/23	
PFOA	ND	0.59	1.8	ng/l	1	10/24/23	
PFOS	ND	0.47	1.8	ng/l	1	10/24/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/24/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/24/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/24/23	

Surrogate(s)

13C2-PFDA	91%	Conc: 32.6	70-130			10/24/23	
13C2-PFHxA	79%	Conc: 28.3	70-130			10/24/23	
d5-EtFOSAA	102%	Conc: 145	70-130			10/24/23	
HFPO-DA-13C3	77%	Conc: 27.4	70-130			10/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

3J09145

Page 13 of 34

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC11-S23
3J09145-05 (Water) Sampled: 10/05/23 15:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48			Analyst: adm
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	4.5	3.1	5.0	ug/l	1	10/15/23	J
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC11-S23
3J09145-05 (Water) Sampled: 10/05/23 15:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48			Analyst: adm
Chloromethane	ND	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-GAC11-S23
 3J09145-05 (Water) Sampled: 10/05/23 15:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	84%	Conc: 41.8	70-130			10/15/23	
4-Bromofluorobenzene	88%	Conc: 44.0	70-130			10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC11-S11
3J09145-06 (Water) Sampled: 10/05/23 15:15 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522				Instr: GCMS20			
Batch ID: W3J1092	Preparation: EPA 522/SPE			Prepared: 10/12/23 08:06		Analyst: mld	
1,4-Dioxane	ND	0.028	0.070	ug/l	1	10/16/23	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	99%	Conc: 10.2	70-130			10/16/23	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W3J0923	Preparation: EPA 5030B			Prepared: 10/11/23 07:45		Analyst: ADM	
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	10/13/23	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W3J1656	Preparation: EPA 537/SPE			Prepared: 10/19/23 08:20		Analyst: jna	
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	10/24/23	
ADONA	ND	0.48	1.7	ng/l	1	10/24/23	
EtFOSAA	ND	0.42	1.7	ng/l	1	10/24/23	
HFPO-DA	ND	0.76	1.7	ng/l	1	10/24/23	
MeFOSAA	ND	0.50	1.7	ng/l	1	10/24/23	
PFBS	ND	0.50	1.7	ng/l	1	10/24/23	
PFDA	ND	0.39	1.7	ng/l	1	10/24/23	
PFDaA	ND	0.57	1.7	ng/l	1	10/24/23	
PFHpA	ND	0.46	1.7	ng/l	1	10/24/23	
PFHxA	ND	0.42	1.7	ng/l	1	10/24/23	
PFHxS	ND	0.52	1.7	ng/l	1	10/24/23	
PFNA	ND	0.45	1.7	ng/l	1	10/24/23	
PFOA	ND	0.58	1.7	ng/l	1	10/24/23	
PFOS	ND	0.46	1.7	ng/l	1	10/24/23	
PFTeDA	ND	0.39	1.7	ng/l	1	10/24/23	
PFTTrDA	ND	0.36	1.7	ng/l	1	10/24/23	
PFUnA	ND	0.41	1.7	ng/l	1	10/24/23	
<i>Surrogate(s)</i>							
13C2-PFDA	99%	Conc: 34.4	70-130			10/24/23	
13C2-PFHxA	100%	Conc: 34.6	70-130			10/24/23	
d5-EtFOSAA	110%	Conc: 153	70-130			10/24/23	
HFPO-DA-13C3	98%	Conc: 34.2	70-130			10/24/23	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS08			
Batch ID: W3J1179	Preparation: EPA 5030B			Prepared: 10/13/23 07:48		Analyst: adm	
3J09145							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC11-S11
3J09145-06 (Water) Sampled: 10/05/23 15:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	6.2	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC11-S11
3J09145-06 (Water) Sampled: 10/05/23 15:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 524.2 Instr: GCMS08							
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
Chloromethane	ND	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-GAC11-S11
3J09145-06 (Water) Sampled: 10/05/23 15:15 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08

Batch ID: W3J1179 **Preparation:** EPA 5030B **Prepared:** 10/13/23 07:48 **Analyst:** adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 44.1	70-130			10/15/23	
------------------------	-----	------------	--------	--	--	----------	--

4-Bromofluorobenzene	90%	Conc: 44.9	70-130			10/15/23	
----------------------	-----	------------	--------	--	--	----------	--

Sample Results

(Continued)

Sample: 1,4-Dioxane, Field Blank
3J09145-07 (Water) Sampled: 10/05/23 15:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20

Batch ID: W3J1092 **Preparation:** EPA 522/SPE **Prepared:** 10/12/23 08:06 **Analyst:** mld

1,4-Dioxane	0.20	0.028	0.070	ug/l	1	10/16/23	
-------------	------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	100%	Conc: 10.4	70-130			10/16/23	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank
3J09145-08 (Water) Sampled: 10/05/23 15:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W3J1179		Preparation: EPA 5030B		Prepared: 10/13/23 07:48		Analyst: adm	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	10/15/23	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	10/15/23	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	10/15/23	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	10/15/23	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	10/15/23	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	10/15/23	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	10/15/23	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	10/15/23	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	10/15/23	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	10/15/23	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	10/15/23	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	10/15/23	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	10/15/23	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	10/15/23	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	10/15/23	
2-Butanone	ND	1.5	5.0	ug/l	1	10/15/23	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
2-Hexanone	ND	1.2	5.0	ug/l	1	10/15/23	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	10/15/23	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	10/15/23	
Acetone	230	3.1	5.0	ug/l	1	10/15/23	
Acrylonitrile	ND	1.5	2.0	ug/l	1	10/15/23	
Benzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Bromochloromethane	ND	0.15	0.50	ug/l	1	10/15/23	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	10/15/23	
Bromoform	ND	0.38	0.50	ug/l	1	10/15/23	
Bromomethane	ND	0.27	0.50	ug/l	1	10/15/23	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	10/15/23	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	10/15/23	
Chlorobenzene	ND	0.15	0.50	ug/l	1	10/15/23	
Chloroethane	ND	0.17	0.50	ug/l	1	10/15/23	
Chloroform	ND	0.27	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank
 3J09145-08 (Water) Sampled: 10/05/23 15:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS08

Batch ID: W3J1179

Preparation: EPA 5030B

Prepared: 10/13/23 07:48

Analyst: adm

Chloromethane	ND	0.23	0.50	ug/l	1	10/15/23	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	10/15/23	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	10/15/23	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dibromomethane	ND	0.20	0.50	ug/l	1	10/15/23	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	10/15/23	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	10/15/23	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	10/15/23	
Ethylbenzene	ND	0.21	0.50	ug/l	1	10/15/23	
Freon 113	ND	1.5	5.0	ug/l	1	10/15/23	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	10/15/23	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
m,p-Xylene	ND	0.33	0.50	ug/l	1	10/15/23	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	10/15/23	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	10/15/23	
Methylene chloride	ND	0.30	0.50	ug/l	1	10/15/23	
Naphthalene	ND	0.35	0.50	ug/l	1	10/15/23	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	10/15/23	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	10/15/23	
o-Xylene	ND	0.20	0.50	ug/l	1	10/15/23	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	10/15/23	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	10/15/23	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	10/15/23	
Styrene	ND	0.19	0.50	ug/l	1	10/15/23	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	10/15/23	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	10/15/23	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
THMs, Total	ND		0.50	ug/l	1	10/15/23	
Toluene	ND	0.29	0.50	ug/l	1	10/15/23	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	10/15/23	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	10/15/23	
Trichloroethene	ND	0.18	0.50	ug/l	1	10/15/23	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	10/15/23	
Vinyl chloride	ND	0.18	0.50	ug/l	1	10/15/23	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank
3J09145-08 (Water) Sampled: 10/05/23 15:30 by Client
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS08
Batch ID: W3J1179 **Preparation:** EPA 5030B **Prepared:** 10/13/23 07:48
Analyst: adm

Xylenes, Total	ND	0.33	0.50	ug/l	1	10/15/23	
----------------	----	------	------	------	---	----------	--

Surrogate(s)

1,2-Dichlorobenzene-d4	90%	Conc: 45.0	70-130			10/15/23	
4-Bromofluorobenzene	93%	Conc: 46.7	70-130			10/15/23	

Sample Results

(Continued)

Sample: PFOA, Field Blank
3J09145-09 (Water) Sampled: 10/05/23 15:30 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1 **Instr:** LCMS06
Batch ID: W3J1656 **Preparation:** EPA 537/SPE **Prepared:** 10/19/23 08:20
Analyst: jna

11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	10/24/23	
9CI-PF3ONS	ND	0.46	1.8	ng/l	1	10/24/23	
ADONA	ND	0.48	1.8	ng/l	1	10/24/23	
EtFOSAA	ND	0.42	1.8	ng/l	1	10/24/23	
HFPO-DA	ND	0.76	1.8	ng/l	1	10/24/23	
MeFOSAA	ND	0.50	1.8	ng/l	1	10/24/23	
PFBS	ND	0.51	1.8	ng/l	1	10/24/23	
PFDA	ND	0.40	1.8	ng/l	1	10/24/23	
PFDoA	ND	0.57	1.8	ng/l	1	10/24/23	
PFHpA	ND	0.47	1.8	ng/l	1	10/24/23	
PFHxA	ND	0.43	1.8	ng/l	1	10/24/23	
PFHxS	ND	0.52	1.8	ng/l	1	10/24/23	
PFNA	ND	0.46	1.8	ng/l	1	10/24/23	
PFOA	ND	0.58	1.8	ng/l	1	10/24/23	
PFOS	ND	0.47	1.8	ng/l	1	10/24/23	
PFTeDA	ND	0.40	1.8	ng/l	1	10/24/23	
PFTTrDA	ND	0.37	1.8	ng/l	1	10/24/23	
PFUnA	ND	0.42	1.8	ng/l	1	10/24/23	

Surrogate(s)

13C2-PFDA	95%	Conc: 33.2	70-130			10/24/23	
13C2-PFHxA	71%	Conc: 24.8	70-130			10/24/23	
d5-EtFOSAA	101%	Conc: 142	70-130			10/24/23	
HFPO-DA-13C3	62%	Conc: 21.6	70-130			10/24/23	S-11

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J1092 - EPA 522											
Blank (W3J1092-BLK1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.40			ug/l	10.0		74	70-130			
LCS (W3J1092-BS1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	0.0654	0.028	0.070	ug/l	0.0600		109	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.15			ug/l	10.0		91	70-130			
LCS Dup (W3J1092-BSD1)					Prepared: 10/12/23 Analyzed: 10/16/23						
1,4-Dioxane	0.0694	0.028	0.070	ug/l	0.0600		116	50-150	6	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.38			ug/l	10.0		94	70-130			

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J0923 - SRL 524M-TCP											
Blank (W3J0923-BLK1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W3J0923-BS1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	0.0191	0.0012	0.0050	ug/l	0.0200		96	80-120			
LCS Dup (W3J0923-BSD1)					Prepared: 10/11/23 Analyzed: 10/12/23						
1,2,3-Trichloropropane	0.0192	0.0012	0.0050	ug/l	0.0200		96	80-120	0.05	20	
Duplicate (W3J0923-DUP1)					Prepared: 10/11/23 Analyzed: 10/13/23						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1656 - EPA 537.1											
Blank (W3J1656-BLK1)						Prepared: 10/19/23 Analyzed: 10/24/23					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	40.0			ng/l	40.0		100	70-130			
13C2-PFHxA	41.1			ng/l	40.0		103	70-130			
d5-EtFOSAA	157			ng/l	160		98	70-130			
HFPO-DA-13C3	38.4			ng/l	40.0		96	70-130			
LCS (W3J1656-BS1)						Prepared: 10/19/23 Analyzed: 10/24/23					
11CI-PF3OUdS	75.3	0.56	2.0	ng/l	80.0		94	70-130			
9CI-PF3ONS	80.3	0.53	2.0	ng/l	80.0		100	70-130			
ADONA	77.1	0.55	2.0	ng/l	80.0		96	70-130			
EtFOSAA	69.1	0.48	2.0	ng/l	80.0		86	70-130			
HFPO-DA	66.9	0.87	2.0	ng/l	80.0		84	70-130			
MeFOSAA	75.7	0.58	2.0	ng/l	80.0		95	70-130			
PFBS	85.4	0.58	2.0	ng/l	80.0		107	70-130			
PFDA	71.6	0.45	2.0	ng/l	80.0		90	70-130			
PFDoA	75.2	0.66	2.0	ng/l	80.0		94	70-130			
PFHpA	80.2	0.53	2.0	ng/l	80.0		100	70-130			
PFHxA	78.1	0.49	2.0	ng/l	80.0		98	70-130			
PFHxS	84.7	0.59	2.0	ng/l	80.0		106	70-130			
PFNA	79.1	0.52	2.0	ng/l	80.0		99	70-130			
PFOA	81.6	0.67	2.0	ng/l	80.0		102	70-130			
PFOS	82.9	0.53	2.0	ng/l	80.0		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1656 - EPA 537.1 (Continued)											
LCS (W3J1656-BS1)						Prepared: 10/19/23 Analyzed: 10/24/23					
PFTeDA	79.1	0.45	2.0	ng/l	80.0		99	70-130			
PFTTrDA	67.7	0.42	2.0	ng/l	80.0		85	70-130			
PFUnA	76.2	0.48	2.0	ng/l	80.0		95	70-130			
<i>Surrogate(s)</i>											
13C2-PFDA	40.6			ng/l	40.0		102	70-130			
13C2-PFHxA	42.0			ng/l	40.0		105	70-130			
d5-EtFOSAA	150			ng/l	160		94	70-130			
HFPO-DA-13C3	36.5			ng/l	40.0		91	70-130			
LCS Dup (W3J1656-BS1)						Prepared: 10/19/23 Analyzed: 10/24/23					
11CI-PF3OUdS	79.6	0.56	2.0	ng/l	80.0		100	70-130	6	30	
9CI-PF3ONS	81.0	0.53	2.0	ng/l	80.0		101	70-130	0.9	30	
ADONA	77.7	0.55	2.0	ng/l	80.0		97	70-130	0.7	30	
EtFOSAA	79.6	0.48	2.0	ng/l	80.0		100	70-130	14	30	
HFPO-DA	68.6	0.87	2.0	ng/l	80.0		86	70-130	3	30	
MeFOSAA	80.6	0.58	2.0	ng/l	80.0		101	70-130	6	30	
PFBS	84.2	0.58	2.0	ng/l	80.0		105	70-130	1	30	
PFDA	71.9	0.45	2.0	ng/l	80.0		90	70-130	0.3	30	
PFDoA	74.7	0.66	2.0	ng/l	80.0		93	70-130	0.7	30	
PFHpA	79.5	0.53	2.0	ng/l	80.0		99	70-130	0.9	30	
PFHxA	77.9	0.49	2.0	ng/l	80.0		97	70-130	0.3	30	
PFHxS	84.1	0.59	2.0	ng/l	80.0		105	70-130	0.7	30	
PFNA	78.0	0.52	2.0	ng/l	80.0		97	70-130	1	30	
PFOA	79.2	0.67	2.0	ng/l	80.0		99	70-130	3	30	
PFOS	81.4	0.53	2.0	ng/l	80.0		102	70-130	2	30	
PFTeDA	81.6	0.45	2.0	ng/l	80.0		102	70-130	3	30	
PFTTrDA	71.9	0.42	2.0	ng/l	80.0		90	70-130	6	30	
PFUnA	77.5	0.48	2.0	ng/l	80.0		97	70-130	2	30	
<i>Surrogate(s)</i>											
13C2-PFDA	41.0			ng/l	40.0		102	70-130			
13C2-PFHxA	41.9			ng/l	40.0		105	70-130			
d5-EtFOSAA	170			ng/l	160		107	70-130			
HFPO-DA-13C3	38.2			ng/l	40.0		96	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC		RPD		Qualifier
							%REC	Limits	RPD	Limit	
Batch: W3J1179 - EPA 524.2											
Blank (W3J1179-BLK1)						Prepared: 10/13/23 Analyzed: 10/15/23					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
Blank (W3J1179-BLK1)					Prepared: 10/13/23 Analyzed: 10/15/23						
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	45.6			ug/l	50.0		91	70-130			
LCS (W3J1179-BS1)					Prepared: 10/13/23 Analyzed: 10/15/23						
1,1,1,2-Tetrachloroethane	4.91	0.24	0.50	ug/l	5.00		98	70-130			
1,1,1-Trichloroethane	4.72	0.26	0.50	ug/l	5.00		94	70-130			
1,1,2,2-Tetrachloroethane	4.70	0.20	0.50	ug/l	5.00		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS (W3J1179-BS1)					Prepared: 10/13/23 Analyzed: 10/15/23						
1,1,2-Trichloroethane	4.75	0.19	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethane	4.76	0.27	0.50	ug/l	5.00		95	70-130			
1,1-Dichloroethene	4.09	0.16	0.50	ug/l	5.00		82	70-130			
1,1-Dichloropropene	4.29	0.14	0.50	ug/l	5.00		86	70-130			
1,2,3-Trichlorobenzene	4.86	0.40	0.50	ug/l	5.00		97	70-130			
1,2,3-Trichloropropane	4.83	0.22	0.50	ug/l	5.00		97	70-130			
1,2,4-Trichlorobenzene	5.10	0.17	0.50	ug/l	5.00		102	70-130			
1,2,4-Trimethylbenzene	4.69	0.20	0.50	ug/l	5.00		94	70-130			
1,2-Dichloroethane	4.68	0.24	0.50	ug/l	5.00		94	70-130			
1,2-Dichloropropane	4.75	0.13	0.50	ug/l	5.00		95	70-130			
1,3,5-Trimethylbenzene	4.61	0.17	0.50	ug/l	5.00		92	70-130			
1,3-Dichloropropane	4.99	0.27	0.50	ug/l	5.00		100	70-130			
2,2-Dichloropropane	4.91	0.17	0.50	ug/l	5.00		98	70-130			
2-Butanone	4.49	1.5	5.0	ug/l	5.00		90	70-130			J
2-Chlorotoluene	4.66	0.15	0.50	ug/l	5.00		93	70-130			
2-Hexanone	4.91	1.2	5.0	ug/l	5.00		98	70-130			J
4-Chlorotoluene	4.64	0.15	0.50	ug/l	5.00		93	70-130			
4-Methyl-2-pentanone	4.70	1.8	5.0	ug/l	5.00		94	70-130			J
Acetone	41.8	3.1	5.0	ug/l	50.0		84	70-130			
Benzene	4.63	0.15	0.50	ug/l	5.00		93	70-130			
Bromobenzene	4.87	0.15	0.50	ug/l	5.00		97	70-130			
Bromochloromethane	5.04	0.15	0.50	ug/l	5.00		101	70-130			
Bromodichloromethane	4.61	0.24	0.50	ug/l	5.00		92	70-130			
Bromoform	4.71	0.38	0.50	ug/l	5.00		94	70-130			
Bromomethane	4.86	0.27	0.50	ug/l	5.00		97	70-130			
Carbon Disulfide	3.68	0.25	0.50	ug/l	5.00		74	70-130			
Carbon tetrachloride	4.48	0.27	0.50	ug/l	5.00		90	70-130			
Chlorobenzene	4.79	0.15	0.50	ug/l	5.00		96	70-130			
Chloroethane	5.07	0.17	0.50	ug/l	5.00		101	70-130			
Chloroform	5.07	0.27	0.50	ug/l	5.00		101	70-130			
Chloromethane	4.29	0.23	0.50	ug/l	5.00		86	70-130			
cis-1,2-Dichloroethene	4.77	0.25	0.50	ug/l	5.00		95	70-130			
cis-1,3-Dichloropropene	4.59	0.30	0.50	ug/l	5.00		92	70-130			
Dibromochloromethane	4.84	0.20	0.50	ug/l	5.00		97	70-130			
Dibromomethane	4.67	0.20	0.50	ug/l	5.00		93	70-130			
Dichlorodifluoromethane (Freon 12)	3.97	0.45	0.50	ug/l	5.00		79	70-130			
Di-isopropyl ether	20.7	1.1	2.0	ug/l	20.0		103	70-130			
Ethyl tert-butyl ether	20.3	1.0	2.0	ug/l	20.0		101	70-130			
Ethylbenzene	4.24	0.21	0.50	ug/l	5.00		85	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)										
LCS (W3J1179-BS1)					Prepared: 10/13/23 Analyzed: 10/15/23					
Freon 113	4.14	1.5	5.0	ug/l	5.00		83 70-130			J
Hexachlorobutadiene	5.07	0.40	0.50	ug/l	5.00		101 70-130			
Isopropylbenzene	4.22	0.18	0.50	ug/l	5.00		84 70-130			
m,p-Xylene	4.44	0.33	0.50	ug/l	5.00		89 70-130			
m-Dichlorobenzene	5.16	0.14	0.50	ug/l	5.00		103 70-130			
Methyl tert-butyl ether (MTBE)	19.8	0.94	2.0	ug/l	20.0		99 70-130			
Methylene chloride	5.28	0.30	0.50	ug/l	5.00		106 70-130			
Naphthalene	4.95	0.35	0.50	ug/l	5.00		99 70-130			
n-Butylbenzene	4.60	0.29	0.50	ug/l	5.00		92 70-130			
n-Propylbenzene	4.58	0.18	0.50	ug/l	5.00		92 70-130			
o-Dichlorobenzene	4.92	0.19	0.50	ug/l	5.00		98 70-130			
o-Xylene	4.69	0.20	0.50	ug/l	5.00		94 70-130			
p-Dichlorobenzene	5.18	0.18	0.50	ug/l	5.00		104 70-130			
p-Isopropyltoluene	4.64	0.25	0.50	ug/l	5.00		93 70-130			
sec-Butylbenzene	4.51	0.24	0.50	ug/l	5.00		90 70-130			
Styrene	4.56	0.19	0.50	ug/l	5.00		91 70-130			
Tert-amyl methyl ether	19.6	0.59	2.0	ug/l	20.0		98 70-130			
tert-Butylbenzene	4.37	0.18	0.50	ug/l	5.00		87 70-130			
Tetrachloroethene	4.66	0.18	0.50	ug/l	5.00		93 70-130			
Toluene	4.36	0.29	0.50	ug/l	5.00		87 70-130			
trans-1,2-Dichloroethene	4.78	0.26	0.50	ug/l	5.00		96 70-130			
trans-1,3-Dichloropropene	5.00	0.32	0.50	ug/l	5.00		100 70-130			
Trichloroethene	4.26	0.18	0.50	ug/l	5.00		85 70-130			
Trichlorofluoromethane	5.18	0.18	0.50	ug/l	5.00		104 70-130			
Vinyl chloride	4.50	0.18	0.50	ug/l	5.00		90 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	53.7			ug/l	50.0		107 70-130			
4-Bromofluorobenzene	52.2			ug/l	50.0		104 70-130			
LCS Dup (W3J1179-BSD1)					Prepared: 10/13/23 Analyzed: 10/15/23					
1,1,1,2-Tetrachloroethane	4.80	0.24	0.50	ug/l	5.00		96 70-130	2	30	
1,1,1-Trichloroethane	4.07	0.26	0.50	ug/l	5.00		81 70-130	15	30	
1,1,2,2-Tetrachloroethane	4.67	0.20	0.50	ug/l	5.00		93 70-130	0.7	30	
1,1,2-Trichloroethane	4.59	0.19	0.50	ug/l	5.00		92 70-130	3	30	
1,1-Dichloroethane	4.86	0.27	0.50	ug/l	5.00		97 70-130	2	30	
1,1-Dichloroethene	3.78	0.16	0.50	ug/l	5.00		76 70-130	8	30	
1,1-Dichloropropene	3.90	0.14	0.50	ug/l	5.00		78 70-130	10	30	
1,2,3-Trichlorobenzene	4.67	0.40	0.50	ug/l	5.00		93 70-130	4	30	
1,2,3-Trichloropropane	4.80	0.22	0.50	ug/l	5.00		96 70-130	0.8	30	
1,2,4-Trichlorobenzene	4.89	0.17	0.50	ug/l	5.00		98 70-130	4	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS Dup (W3J1179-BSD1)											
						Prepared: 10/13/23 Analyzed: 10/15/23					
1,2,4-Trimethylbenzene	4.44	0.20	0.50	ug/l	5.00		89	70-130	5	30	
1,2-Dichloroethane	4.61	0.24	0.50	ug/l	5.00		92	70-130	2	30	
1,2-Dichloropropane	4.59	0.13	0.50	ug/l	5.00		92	70-130	3	30	
1,3,5-Trimethylbenzene	4.29	0.17	0.50	ug/l	5.00		86	70-130	7	30	
1,3-Dichloropropane	4.81	0.27	0.50	ug/l	5.00		96	70-130	4	30	
2,2-Dichloropropane	4.72	0.17	0.50	ug/l	5.00		94	70-130	4	30	
2-Butanone	4.45	1.5	5.0	ug/l	5.00		89	70-130	1	30	J
2-Chlorotoluene	4.43	0.15	0.50	ug/l	5.00		89	70-130	5	30	
2-Hexanone	4.70	1.2	5.0	ug/l	5.00		94	70-130	4	30	J
4-Chlorotoluene	4.44	0.15	0.50	ug/l	5.00		89	70-130	4	30	
4-Methyl-2-pentanone	4.55	1.8	5.0	ug/l	5.00		91	70-130	3	30	J
Acetone	42.0	3.1	5.0	ug/l	50.0		84	70-130	0.6	30	
Benzene	4.40	0.15	0.50	ug/l	5.00		88	70-130	5	30	
Bromobenzene	4.86	0.15	0.50	ug/l	5.00		97	70-130	0.08	30	
Bromochloromethane	5.05	0.15	0.50	ug/l	5.00		101	70-130	0.2	30	
Bromodichloromethane	4.48	0.24	0.50	ug/l	5.00		90	70-130	3	30	
Bromoform	4.67	0.38	0.50	ug/l	5.00		93	70-130	1	30	
Bromomethane	4.67	0.27	0.50	ug/l	5.00		93	70-130	4	30	
Carbon Disulfide	3.32	0.25	0.50	ug/l	5.00		66	70-130	10	30	Q-ME
Carbon tetrachloride	4.04	0.27	0.50	ug/l	5.00		81	70-130	10	30	
Chlorobenzene	4.63	0.15	0.50	ug/l	5.00		93	70-130	3	30	
Chloroethane	4.52	0.17	0.50	ug/l	5.00		90	70-130	11	30	
Chloroform	4.93	0.27	0.50	ug/l	5.00		99	70-130	3	30	
Chloromethane	4.22	0.23	0.50	ug/l	5.00		84	70-130	2	30	
cis-1,2-Dichloroethene	4.70	0.25	0.50	ug/l	5.00		94	70-130	2	30	
cis-1,3-Dichloropropene	4.46	0.30	0.50	ug/l	5.00		89	70-130	3	30	
Dibromochloromethane	4.75	0.20	0.50	ug/l	5.00		95	70-130	2	30	
Dibromomethane	4.60	0.20	0.50	ug/l	5.00		92	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	3.78	0.45	0.50	ug/l	5.00		76	70-130	5	30	
Di-isopropyl ether	19.9	1.1	2.0	ug/l	20.0		99	70-130	4	30	
Ethyl tert-butyl ether	20.0	1.0	2.0	ug/l	20.0		100	70-130	1	30	
Ethylbenzene	3.85	0.21	0.50	ug/l	5.00		77	70-130	10	30	
Freon 113	3.56	1.5	5.0	ug/l	5.00		71	70-130	15	30	J
Hexachlorobutadiene	4.75	0.40	0.50	ug/l	5.00		95	70-130	7	30	
Isopropylbenzene	3.86	0.18	0.50	ug/l	5.00		77	70-130	9	30	
m,p-Xylene	4.15	0.33	0.50	ug/l	5.00		83	70-130	7	30	
m-Dichlorobenzene	5.00	0.14	0.50	ug/l	5.00		100	70-130	3	30	
Methyl tert-butyl ether (MTBE)	15.1	0.94	2.0	ug/l	20.0		75	70-130	27	30	
Methylene chloride	3.83	0.30	0.50	ug/l	5.00		77	70-130	32	30	Q-12

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
 11/06/2023 13:42

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W3J1179 - EPA 524.2 (Continued)											
LCS Dup (W3J1179-BSD1)											
					Prepared: 10/13/23 Analyzed: 10/15/23						
Naphthalene	5.14	0.35	0.50	ug/l	5.00		103	70-130	4	30	
n-Butylbenzene	4.25	0.29	0.50	ug/l	5.00		85	70-130	8	30	
n-Propylbenzene	4.24	0.18	0.50	ug/l	5.00		85	70-130	8	30	
o-Dichlorobenzene	4.83	0.19	0.50	ug/l	5.00		97	70-130	2	30	
o-Xylene	4.46	0.20	0.50	ug/l	5.00		89	70-130	5	30	
p-Dichlorobenzene	5.03	0.18	0.50	ug/l	5.00		101	70-130	3	30	
p-Isopropyltoluene	4.27	0.25	0.50	ug/l	5.00		85	70-130	8	30	
sec-Butylbenzene	4.09	0.24	0.50	ug/l	5.00		82	70-130	10	30	
Styrene	4.38	0.19	0.50	ug/l	5.00		88	70-130	4	30	
Tert-amyl methyl ether	19.1	0.59	2.0	ug/l	20.0		96	70-130	3	30	
tert-Butylbenzene	3.99	0.18	0.50	ug/l	5.00		80	70-130	9	30	
Tetrachloroethene	4.27	0.18	0.50	ug/l	5.00		85	70-130	9	30	
Toluene	4.13	0.29	0.50	ug/l	5.00		83	70-130	6	30	
trans-1,2-Dichloroethene	3.60	0.26	0.50	ug/l	5.00		72	70-130	28	30	
trans-1,3-Dichloropropene	4.85	0.32	0.50	ug/l	5.00		97	70-130	3	30	
Trichloroethene	3.91	0.18	0.50	ug/l	5.00		78	70-130	9	30	
Trichlorofluoromethane	4.29	0.18	0.50	ug/l	5.00		86	70-130	19	30	
Vinyl chloride	4.21	0.18	0.50	ug/l	5.00		84	70-130	7	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	54.2			ug/l	50.0		108	70-130			
4-Bromofluorobenzene	52.7			ug/l	50.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Reported:
 11/06/2023 13:42

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
Q-ME	Acceptable QC with marginal exceedance
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # 3309145 Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles			PROJECT: COSM 97-005			ANALYSES REQUESTED				SPECIAL HANDLING		
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018			PHONE: ckindle@BrwnCald.com			EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA			<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input checked="" type="checkbox"/> Rush Extractions 50% <input checked="" type="checkbox"/> 10-15 Business Days <input type="checkbox"/> Ch <small>kege</small> <input type="checkbox"/> nds/holidays
PROJECT MANAGER Chris Kindle			SAMPLER invoice to Rose Ford, Rford@BrwnCald.com									
ID# <small>(For Lab Use Only)</small>	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.							
	10/05/23	14:35	G	PT-UV10-S10	4			X	X			
	10/05/23	15:20	G	PT-UV11-S10	4			X	X			
	10/05/23	14:40	G	PT-GAC10-S23	9	X	X	X	X			
	10/05/23	14:40	G	PT-GAC10-S11	9	X	X	X	X			
	10/05/23	15:15	G	PT-GAC11-S23	9	X	X	X	X			
	10/05/23	15:15	G	PT-GAC11-S11	9	X	X	X	X			
	10/05/23	15:30	G	1,4-Dioxane, Field Blank	2	X						
	10/05/23	15:30	G	Trip Blank	1		X					
	10/05/23	15:30	G	PFOA, Field Blank	1				X			

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/9/23 8:40	RECEIVED BY <i>[Signature]</i>	10/9/23 8:40	SAMPLE CONDITION: Actual Temperature: <i>7.0</i> Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab <i>[Signature]</i>	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = OR OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 10/11/23 10:30	RECEIVED BY <i>[Signature]</i>	10/9/23 10:30		
RELINQUISHED BY	DATE / TIME	RECEIVED BY			

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **3I09145**

Date/Time Received: **10/9/2023 10:30**

WKO Logged by: **Jerald Ancheta**

of Samples: **9**

Samples Checked by: **Jerico Bolotano**

Delivered by: **RMS**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		7.8°C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		Wet		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> <6mm/Pea Size? pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free Chlorine Tested <0.1 (Organics Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ORG pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
pH adjusted for ORG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: Jerald Ancheta

Date: **10/9/2023**

Work Orders: 4B06189

Report Date: 3/06/2024

Received Date: 2/6/2024

Project: COSM 97-005 - COPCs

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

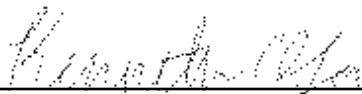
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/06/24 with the Chain-of-Custody document. The samples were received in good condition, at 4.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-RO#4 - 515 Tech 4 Permeate	Windsor Lee	4B06189-01	Water	02/06/24 12:15	
PT-RO#4 - 5150 Train 4 Permeate Duplicate	Windsor Lee	4B06189-02	Water	02/06/24 12:15	
PT-RO#2 - 515 Train 2 Permeate	Windsor Lee	4B06189-03	Water	02/06/24 13:00	
PT-RO#4 - 514 RO Feed	Windsor Lee	4B06189-04	Water	02/06/24 13:30	
Travel Blank		4B06189-05	Water	02/06/24 00:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗		
Bromomethane	74-83-9	⊗		
Chloroethane	75-00-3	⊗		
Di-isopropyl ether	108-20-3	⊗		
2-Butanone	78-93-3	⊗		
2,2-Dichloropropane	594-20-7	⊗		
Bromochloromethane	74-97-5	⊗		
1,1-Dichloropropene	563-58-6	⊗		
Dibromomethane	74-95-3	⊗		
1,3-Dichloropropane	142-28-9	⊗		
2-Hexanone	591-78-6	⊗		
Bromobenzene	108-86-1	⊗		
1,2,3-Trichloropropane	96-18-4	⊗		
p-Isopropyltoluene	99-87-6	⊗		
Hexachlorobutadiene	87-68-3	⊗		
1,3-Dichloropropene, Total	542-75-6	⊗		
Acetone	67-64-1	⊗		
Acrylonitrile	107-13-1	⊗		
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		
SRL 524M-TCP in Water				
1,2,3-Trichloropropane	96-18-4		⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-RO#4 - 515 Tech 4 Permeate

Sampled: 02/06/24 12:15 by Windsor Lee

4B06189-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0739	Preparation: EPA 522/SPE		Prepared: 02/09/24 08:01		Analyst: mld		
1,4-Dioxane	0.028	0.028	0.070	ug/l	1	02/12/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 9.28	70-130			02/12/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1017	Preparation: EPA 5030B		Prepared: 02/13/24 10:20		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/13/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B0783	Preparation: EPA 537/SPE		Prepared: 02/09/24 10:21		Analyst: JNA		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	02/20/24	
9Cl-PF3ONS	ND	0.44	1.7	ng/l	1	02/20/24	
ADONA	ND	0.46	1.7	ng/l	1	02/20/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	02/20/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	02/20/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	02/20/24	
PFBS	ND	0.48	1.7	ng/l	1	02/20/24	
PFDA	ND	0.38	1.7	ng/l	1	02/20/24	
PFDoA	ND	0.55	1.7	ng/l	1	02/20/24	
PFHpA	ND	0.45	1.7	ng/l	1	02/20/24	
PFHxA	ND	0.41	1.7	ng/l	1	02/20/24	
PFHxS	ND	0.50	1.7	ng/l	1	02/20/24	
PFNA	ND	0.43	1.7	ng/l	1	02/20/24	
PFOA	ND	0.56	1.7	ng/l	1	02/20/24	
PFOS	ND	0.44	1.7	ng/l	1	02/20/24	
PFTeDA	ND	0.38	1.7	ng/l	1	02/20/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	02/20/24	
PFUnA	ND	0.40	1.7	ng/l	1	02/20/24	
<i>Surrogate(s)</i>							
13C2-PFDA	109%	Conc: 36.5	70-130			02/20/24	
13C2-PFHxA	103%	Conc: 34.3	70-130			02/20/24	
d5-EtFOSAA	104%	Conc: 140	70-130			02/20/24	
HFPO-DA-13C3	95%	Conc: 31.7	70-130			02/20/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 515 Tech 4 Permeate

Sampled: 02/06/24 12:15 by Windsor Lee

4B06189-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/16/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/16/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/16/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/16/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/16/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/16/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/16/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/16/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/16/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/16/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/16/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/16/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/16/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/16/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/16/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/16/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/16/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/16/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/16/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/16/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/16/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/16/24	
Acetone	ND	3.1	5.0	ug/l	1	02/16/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/16/24	
Benzene	ND	0.15	0.50	ug/l	1	02/16/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/16/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/16/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/16/24	
Bromoform	8.9	0.38	0.50	ug/l	1	02/16/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/16/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/16/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/16/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/16/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/16/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 515 Tech 4 Permeate

Sampled: 02/06/24 12:15 by Windsor Lee

4B06189-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
Chloroform	ND	0.27	0.50	ug/l	1	02/16/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/16/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/16/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/16/24	
Dibromochloromethane	1.3	0.20	0.50	ug/l	1	02/16/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/16/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/16/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/16/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/16/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/16/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/16/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/16/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/16/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/16/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/16/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/16/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/16/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/16/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/16/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/16/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/16/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/16/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/16/24	
Styrene	ND	0.19	0.50	ug/l	1	02/16/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/16/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/16/24	
THMs, Total	10		0.50	ug/l	1	02/16/24	
Toluene	ND	0.29	0.50	ug/l	1	02/16/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/16/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/16/24	
Trichloroethene	2.2	0.18	0.50	ug/l	1	02/16/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-RO#4 - 515 Tech 4 Permeate

Sampled: 02/06/24 12:15 by Windsor Lee

4B06189-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/16/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/16/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/16/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	99%	Conc: 49.4	70-130			02/16/24	
4-Bromofluorobenzene	107%	Conc: 53.4	70-130			02/16/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 5150 Train 4 Permeate Duplicate

Sampled: 02/06/24 12:15 by Windsor Lee

4B06189-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0740	Preparation: EPA 522/SPE		Prepared: 02/09/24 08:03		Analyst: mld		
1,4-Dioxane	0.028	0.028	0.070	ug/l	1	02/12/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	88%	Conc: 8.94	70-130			02/12/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1017	Preparation: EPA 5030B		Prepared: 02/13/24 10:20		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/13/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B0783	Preparation: EPA 537/SPE		Prepared: 02/09/24 10:21		Analyst: JNA		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	02/20/24	
9Cl-PF3ONS	ND	0.44	1.7	ng/l	1	02/20/24	
ADONA	ND	0.46	1.7	ng/l	1	02/20/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	02/20/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	02/20/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	02/20/24	
PFBS	ND	0.48	1.7	ng/l	1	02/20/24	
PFDA	ND	0.38	1.7	ng/l	1	02/20/24	
PFDoA	ND	0.55	1.7	ng/l	1	02/20/24	
PFHpA	ND	0.45	1.7	ng/l	1	02/20/24	
PFHxA	ND	0.41	1.7	ng/l	1	02/20/24	
PFHxS	ND	0.50	1.7	ng/l	1	02/20/24	
PFNA	ND	0.43	1.7	ng/l	1	02/20/24	
PFOA	ND	0.56	1.7	ng/l	1	02/20/24	
PFOS	ND	0.44	1.7	ng/l	1	02/20/24	
PFTeDA	ND	0.38	1.7	ng/l	1	02/20/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	02/20/24	
PFUnA	ND	0.40	1.7	ng/l	1	02/20/24	
<i>Surrogate(s)</i>							
13C2-PFDA	107%	Conc: 35.8	70-130			02/20/24	
13C2-PFHxA	101%	Conc: 33.8	70-130			02/20/24	
d5-EtFOSAA	102%	Conc: 137	70-130			02/20/24	
HFPO-DA-13C3	95%	Conc: 31.6	70-130			02/20/24	

Volatile Organic Compounds by P&T and GC/MS

4B06189

Page 7 of 44

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 5150 Train 4 Permeate Duplicate

Sampled: 02/06/24 12:15 by Windsor Lee

4B06189-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/16/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/16/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/16/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/16/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/16/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/16/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/16/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/16/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/16/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/16/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/16/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/16/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/16/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/16/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/16/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/16/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/16/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/16/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/16/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/16/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/16/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/16/24	
Acetone	ND	3.1	5.0	ug/l	1	02/16/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/16/24	
Benzene	ND	0.15	0.50	ug/l	1	02/16/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/16/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/16/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/16/24	
Bromoform	8.2	0.38	0.50	ug/l	1	02/16/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/16/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/16/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/16/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/16/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/16/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 5150 Train 4 Permeate Duplicate

Sampled: 02/06/24 12:15 by Windsor Lee

4B06189-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B			Prepared: 02/15/24 08:03		Analyst: JAN
Chloroform	ND	0.27	0.50	ug/l	1	02/16/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/16/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/16/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/16/24	
Dibromochloromethane	0.90	0.20	0.50	ug/l	1	02/16/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/16/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/16/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/16/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/16/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/16/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/16/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/16/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/16/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/16/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/16/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/16/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/16/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/16/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/16/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/16/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/16/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/16/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/16/24	
Styrene	ND	0.19	0.50	ug/l	1	02/16/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/16/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/16/24	
THMs, Total	9.1		0.50	ug/l	1	02/16/24	
Toluene	ND	0.29	0.50	ug/l	1	02/16/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/16/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/16/24	
Trichloroethene	2.4	0.18	0.50	ug/l	1	02/16/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 5150 Train 4 Permeate Duplicate

Sampled: 02/06/24 12:15 by Windsor Lee

4B06189-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/16/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/16/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/16/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	116%	Conc: 57.8	70-130			02/16/24	
4-Bromofluorobenzene	114%	Conc: 57.1	70-130			02/16/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#2 - 515 Train 2 Permeate

Sampled: 02/06/24 13:00 by Windsor Lee

4B06189-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0740	Preparation: EPA 522/SPE		Prepared: 02/09/24 08:03		Analyst: mld		
1,4-Dioxane	0.039	0.028	0.070	ug/l	1	02/12/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	88%	Conc: 9.15	70-130			02/12/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1017	Preparation: EPA 5030B		Prepared: 02/13/24 10:20		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/13/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B0783	Preparation: EPA 537/SPE		Prepared: 02/09/24 10:21		Analyst: JNA		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	02/20/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	02/20/24	
ADONA	ND	0.47	1.7	ng/l	1	02/20/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/20/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	02/20/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	02/20/24	
PFBS	ND	0.49	1.7	ng/l	1	02/20/24	
PFDA	ND	0.38	1.7	ng/l	1	02/20/24	
PFDoA	ND	0.55	1.7	ng/l	1	02/20/24	
PFHpA	ND	0.45	1.7	ng/l	1	02/20/24	
PFHxA	ND	0.41	1.7	ng/l	1	02/20/24	
PFHxS	ND	0.50	1.7	ng/l	1	02/20/24	
PFNA	ND	0.44	1.7	ng/l	1	02/20/24	
PFOA	ND	0.56	1.7	ng/l	1	02/20/24	
PFOS	ND	0.45	1.7	ng/l	1	02/20/24	
PFTeDA	ND	0.38	1.7	ng/l	1	02/20/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	02/20/24	
PFUnA	ND	0.40	1.7	ng/l	1	02/20/24	
<i>Surrogate(s)</i>							
13C2-PFDA	108%	Conc: 36.3	70-130			02/20/24	
13C2-PFHxA	103%	Conc: 34.6	70-130			02/20/24	
d5-EtFOSAA	106%	Conc: 143	70-130			02/20/24	
HFPO-DA-13C3	97%	Conc: 32.8	70-130			02/20/24	

Volatile Organic Compounds by P&T and GC/MS

4B06189

Page 11 of 44

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#2 - 515 Train 2 Permeate

Sampled: 02/06/24 13:00 by Windsor Lee

4B06189-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/16/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/16/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/16/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/16/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/16/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/16/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/16/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/16/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/16/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/16/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/16/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/16/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/16/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/16/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/16/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/16/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/16/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/16/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/16/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/16/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/16/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/16/24	
Acetone	ND	3.1	5.0	ug/l	1	02/16/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/16/24	
Benzene	ND	0.15	0.50	ug/l	1	02/16/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/16/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/16/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/16/24	
Bromoform	6.9	0.38	0.50	ug/l	1	02/16/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/16/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/16/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/16/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/16/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/16/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#2 - 515 Train 2 Permeate

Sampled: 02/06/24 13:00 by Windsor Lee

4B06189-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
Chloroform	ND	0.27	0.50	ug/l	1	02/16/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/16/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/16/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/16/24	
Dibromochloromethane	0.84	0.20	0.50	ug/l	1	02/16/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/16/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/16/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/16/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/16/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/16/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/16/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/16/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/16/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/16/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/16/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/16/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/16/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/16/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/16/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/16/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/16/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/16/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/16/24	
Styrene	ND	0.19	0.50	ug/l	1	02/16/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/16/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/16/24	
THMs, Total	7.7		0.50	ug/l	1	02/16/24	
Toluene	ND	0.29	0.50	ug/l	1	02/16/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/16/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/16/24	
Trichloroethene	1.6	0.18	0.50	ug/l	1	02/16/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#2 - 515 Train 2 Permeate

Sampled: 02/06/24 13:00 by Windsor Lee

4B06189-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/16/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/16/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/16/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	108%	Conc: 53.8	70-130			02/16/24	
4-Bromofluorobenzene	109%	Conc: 54.4	70-130			02/16/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 514 RO Feed

Sampled: 02/06/24 13:30 by Windsor Lee

4B06189-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0740	Preparation: EPA 522/SPE		Prepared: 02/09/24 08:03		Analyst: mld		
1,4-Dioxane	0.27	0.028	0.070	ug/l	1	02/12/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	98%	Conc: 9.58	70-130			02/12/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1018	Preparation: EPA 5030B		Prepared: 02/13/24 10:21		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/13/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B0783	Preparation: EPA 537/SPE		Prepared: 02/09/24 10:21		Analyst: JNA		
11CI-PF3OUdS	ND	0.46	1.7	ng/l	1	02/20/24	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	02/20/24	
ADONA	ND	0.46	1.7	ng/l	1	02/20/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	02/20/24	
HFPO-DA	ND	0.72	1.7	ng/l	1	02/20/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	02/20/24	
PFBS	ND	0.48	1.7	ng/l	1	02/20/24	
PFDA	ND	0.37	1.7	ng/l	1	02/20/24	
PFDoA	ND	0.54	1.7	ng/l	1	02/20/24	
PFHpA	ND	0.44	1.7	ng/l	1	02/20/24	
PFHxA	ND	0.40	1.7	ng/l	1	02/20/24	
PFHxS	ND	0.49	1.7	ng/l	1	02/20/24	
PFNA	ND	0.43	1.7	ng/l	1	02/20/24	
PFOA	ND	0.55	1.7	ng/l	1	02/20/24	
PFOS	ND	0.44	1.7	ng/l	1	02/20/24	
PFTeDA	ND	0.37	1.7	ng/l	1	02/20/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	02/20/24	
PFUnA	ND	0.39	1.7	ng/l	1	02/20/24	
<i>Surrogate(s)</i>							
13C2-PFDA	105%	Conc: 34.8	70-130			02/20/24	
13C2-PFHxA	101%	Conc: 33.5	70-130			02/20/24	
d5-EtFOSAA	104%	Conc: 138	70-130			02/20/24	
HFPO-DA-13C3	96%	Conc: 31.9	70-130			02/20/24	

Volatile Organic Compounds by P&T and GC/MS

4B06189

Page 15 of 44

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 514 RO Feed

Sampled: 02/06/24 13:30 by Windsor Lee

4B06189-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/16/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/16/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/16/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/16/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/16/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/16/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/16/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/16/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/16/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/16/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/16/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/16/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/16/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/16/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/16/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/16/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/16/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/16/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/16/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/16/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/16/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/16/24	
Acetone	ND	3.1	5.0	ug/l	1	02/16/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/16/24	
Benzene	ND	0.15	0.50	ug/l	1	02/16/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/16/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/16/24	
Bromodichloromethane	0.56	0.24	0.50	ug/l	1	02/16/24	
Bromoform	8.6	0.38	0.50	ug/l	1	02/16/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/16/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/16/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/16/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/16/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/16/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 514 RO Feed

Sampled: 02/06/24 13:30 by Windsor Lee

4B06189-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
Chloroform	0.44	0.27	0.50	ug/l	1	02/16/24	J
Chloromethane	ND	0.23	0.50	ug/l	1	02/16/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/16/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/16/24	
Dibromochloromethane	2.1	0.20	0.50	ug/l	1	02/16/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/16/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/16/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/16/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/16/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/16/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/16/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/16/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/16/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/16/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/16/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/16/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/16/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/16/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/16/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/16/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/16/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/16/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/16/24	
Styrene	ND	0.19	0.50	ug/l	1	02/16/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/16/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/16/24	
Tetrachloroethene	0.39	0.18	0.50	ug/l	1	02/16/24	J
THMs, Total	11		0.50	ug/l	1	02/16/24	
Toluene	ND	0.29	0.50	ug/l	1	02/16/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/16/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/16/24	
Trichloroethene	7.8	0.18	0.50	ug/l	1	02/16/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4 - 514 RO Feed

Sampled: 02/06/24 13:30 by Windsor Lee

4B06189-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS17				
Batch ID: W4B1243		Preparation: EPA 5030B		Prepared: 02/15/24 08:03		Analyst: JAN	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/16/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/16/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/16/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	96%	Conc: 47.8	70-130			02/16/24	
4-Bromofluorobenzene	94%	Conc: 47.0	70-130			02/16/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Travel Blank

Sampled: 02/06/24 0:00 by

4B06189-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W4B0783

Preparation: EPA 537/SPE

Prepared: 02/09/24 10:21

Analyst: JNA

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	02/20/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	02/20/24	
ADONA	ND	0.49	1.8	ng/l	1	02/20/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	02/20/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	02/20/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	02/20/24	
PFBS	ND	0.51	1.8	ng/l	1	02/20/24	
PFDA	ND	0.40	1.8	ng/l	1	02/20/24	
PFDoA	ND	0.58	1.8	ng/l	1	02/20/24	
PFHpA	ND	0.48	1.8	ng/l	1	02/20/24	
PFHxA	ND	0.43	1.8	ng/l	1	02/20/24	
PFHxS	ND	0.53	1.8	ng/l	1	02/20/24	
PFNA	ND	0.46	1.8	ng/l	1	02/20/24	
PFOA	ND	0.59	1.8	ng/l	1	02/20/24	
PFOS	ND	0.47	1.8	ng/l	1	02/20/24	
PFTeDA	ND	0.40	1.8	ng/l	1	02/20/24	
PFTrDA	ND	0.37	1.8	ng/l	1	02/20/24	
PFUnA	ND	0.42	1.8	ng/l	1	02/20/24	

Surrogate(s)

13C2-PFDA	108%	Conc: 38.6	70-130		02/20/24
13C2-PFHxA	103%	Conc: 36.6	70-130		02/20/24
d5-EtFOSAA	105%	Conc: 150	70-130		02/20/24
HFPO-DA-13C3	97%	Conc: 34.4	70-130		02/20/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Travel Blank

Sampled: 02/06/24 0:00 by

4B06189-05RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1504		Preparation: EPA 5030B		Prepared: 02/20/24 09:55		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/20/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/20/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/20/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/20/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/20/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/20/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/20/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/20/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/20/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/20/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/20/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/20/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/20/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/20/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/20/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/20/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/20/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/20/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/20/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/20/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/20/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/20/24	
Acetone	1100	3.1	5.0	ug/l	1	02/20/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/20/24	
Benzene	ND	0.15	0.50	ug/l	1	02/20/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/20/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/20/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/20/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/20/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/20/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/20/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/20/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/20/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/20/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Travel Blank

Sampled: 02/06/24 0:00 by

4B06189-05RE1 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1504		Preparation: EPA 5030B		Prepared: 02/20/24 09:55		Analyst: ADM	
Chloroform	ND	0.27	0.50	ug/l	1	02/20/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/20/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/20/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/20/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/20/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/20/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/20/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/20/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/20/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/20/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/20/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/20/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/20/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/20/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/20/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/20/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/20/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/20/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/20/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/20/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/20/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/20/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/20/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/20/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/20/24	
Styrene	ND	0.19	0.50	ug/l	1	02/20/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/20/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/20/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/20/24	
THMs, Total	ND		0.50	ug/l	1	02/20/24	
Toluene	ND	0.29	0.50	ug/l	1	02/20/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/20/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/20/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/20/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Travel Blank

Sampled: 02/06/24 0:00 by

4B06189-05RE1 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1504		Preparation: EPA 5030B		Prepared: 02/20/24 09:55		Analyst: ADM	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/20/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/20/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/20/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	81%	Conc: 40.4	70-130			02/20/24	
4-Bromofluorobenzene	83%	Conc: 41.4	70-130			02/20/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B0739 - EPA 522										
Blank (W4B0739-BLK1)										
1,4-Dioxane	ND	0.028	0.070	ug/l						
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	7.94			ug/l	10.0		79 70-130			
LCS (W4B0739-BS1)										
1,4-Dioxane	0.356	0.028	0.070	ug/l	0.400		89 70-130			
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	9.58			ug/l	10.0		96 70-130			
LCS Dup (W4B0739-BSD1)										
1,4-Dioxane	0.347	0.028	0.070	ug/l	0.400		87 70-130	3	30	
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.95			ug/l	10.0		90 70-130			
Batch: W4B0740 - EPA 522										
Blank (W4B0740-BLK1)										
1,4-Dioxane	ND	0.028	0.070	ug/l						
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.41			ug/l	10.0		84 70-130			
LCS (W4B0740-BS1)										
1,4-Dioxane	2.13	0.028	0.070	ug/l	2.00		106 70-130			
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	11.0			ug/l	10.0		110 70-130			
LCS Dup (W4B0740-BSD1)										
1,4-Dioxane	1.70	0.028	0.070	ug/l	2.00		85 70-130	22	30	
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.66			ug/l	10.0		87 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1017 - SRL 524M-TCP										
Blank (W4B1017-BLK1)										
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l						
Prepared & Analyzed: 02/13/24										
LCS (W4B1017-BS1)										
1,2,3-Trichloropropane	0.0179	0.0012	0.0050	ug/l	0.0200		90 80-120			
Prepared & Analyzed: 02/13/24										
LCS Dup (W4B1017-BSD1)										
1,2,3-Trichloropropane	0.0189	0.0012	0.0050	ug/l	0.0200		94 80-120	5	20	
Prepared & Analyzed: 02/13/24										
Duplicate (W4B1017-DUP1)										
Source: 4B06169-01										
1,2,3-Trichloropropane	0.00174	0.0012	0.0050	ug/l		0.00236		30	20	J
Prepared & Analyzed: 02/13/24										
Batch: W4B1018 - SRL 524M-TCP										
Blank (W4B1018-BLK1)										
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l						
Prepared & Analyzed: 02/13/24										
LCS (W4B1018-BS1)										
1,2,3-Trichloropropane	0.0179	0.0012	0.0050	ug/l	0.0200		90 80-120			
Prepared & Analyzed: 02/13/24										
LCS Dup (W4B1018-BSD1)										
1,2,3-Trichloropropane	0.0168	0.0012	0.0050	ug/l	0.0200		84 80-120	6	20	
Prepared & Analyzed: 02/13/24										
Duplicate (W4B1018-DUP1)										
Source: 4B08050-01										
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND			20	
Prepared & Analyzed: 02/13/24										

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B0783 - EPA 537.1										
Blank (W4B0783-BLK1)					Prepared: 02/09/24 Analyzed: 02/20/24					
11CI-PF3OUdS	ND	0.56	2.0	ng/l						
9CI-PF3ONS	ND	0.53	2.0	ng/l						
ADONA	ND	0.55	2.0	ng/l						
EtFOSAA	ND	0.48	2.0	ng/l						
HFPO-DA	ND	0.87	2.0	ng/l						
MeFOSAA	ND	0.58	2.0	ng/l						
PFBS	ND	0.58	2.0	ng/l						
PFDA	ND	0.45	2.0	ng/l						
PFDoA	ND	0.66	2.0	ng/l						
PFHpA	ND	0.53	2.0	ng/l						
PFHxA	ND	0.49	2.0	ng/l						
PFHxS	ND	0.59	2.0	ng/l						
PFNA	ND	0.52	2.0	ng/l						
PFOA	ND	0.67	2.0	ng/l						
PFOS	ND	0.53	2.0	ng/l						
PFTeDA	ND	0.45	2.0	ng/l						
PFTrDA	ND	0.42	2.0	ng/l						
PFUnA	ND	0.48	2.0	ng/l						
<i>Surrogate(s)</i>										
13C2-PFDA	42.8			ng/l	40.0		107 70-130			
13C2-PFHxA	41.1			ng/l	40.0		103 70-130			
d5-EtFOSAA	158			ng/l	160		99 70-130			
HFPO-DA-13C3	38.5			ng/l	40.0		96 70-130			
LCS (W4B0783-BS1)					Prepared: 02/09/24 Analyzed: 02/20/24					
11CI-PF3OUdS	1.64	0.56	2.0	ng/l	2.00		82 70-130			J
9CI-PF3ONS	1.80	0.53	2.0	ng/l	2.00		90 70-130			J
ADONA	2.00	0.55	2.0	ng/l	2.00		100 70-130			
EtFOSAA	1.85	0.48	2.0	ng/l	2.00		92 70-130			J
HFPO-DA	1.92	0.87	2.0	ng/l	2.00		96 70-130			J
MeFOSAA	1.83	0.58	2.0	ng/l	2.00		91 70-130			J
PFBS	1.97	0.58	2.0	ng/l	2.00		98 70-130			J
PFDA	1.93	0.45	2.0	ng/l	2.00		97 70-130			J
PFDoA	1.99	0.66	2.0	ng/l	2.00		99 70-130			J
PFHpA	2.07	0.53	2.0	ng/l	2.00		104 70-130			
PFHxA	2.04	0.49	2.0	ng/l	2.00		102 70-130			
PFHxS	1.95	0.59	2.0	ng/l	2.00		97 70-130			J
PFNA	2.08	0.52	2.0	ng/l	2.00		104 70-130			
PFOA	2.13	0.67	2.0	ng/l	2.00		106 70-130			
PFOS	1.84	0.53	2.0	ng/l	2.00		92 70-130			J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0783 - EPA 537.1 (Continued)											
LCS (W4B0783-BS1)						Prepared: 02/09/24 Analyzed: 02/20/24					
PFTeDA	2.07	0.45	2.0	ng/l	2.00		103	70-130			
PFTTrDA	1.80	0.42	2.0	ng/l	2.00		90	70-130			J
PFUnA	1.80	0.48	2.0	ng/l	2.00		90	70-130			J
<i>Surrogate(s)</i>											
13C2-PFDA	42.7			ng/l	40.0		107	70-130			
13C2-PFHxA	40.9			ng/l	40.0		102	70-130			
d5-EtFOSAA	163			ng/l	160		102	70-130			
HFPO-DA-13C3	39.1			ng/l	40.0		98	70-130			
LCS Dup (W4B0783-BSD1)						Prepared: 02/09/24 Analyzed: 02/20/24					
11CI-PF3OUdS	1.72	0.56	2.0	ng/l	2.00		86	70-130	5	30	J
9CI-PF3ONS	1.76	0.53	2.0	ng/l	2.00		88	70-130	2	30	J
ADONA	2.02	0.55	2.0	ng/l	2.00		101	70-130	0.9	30	
EtFOSAA	1.83	0.48	2.0	ng/l	2.00		91	70-130	1	30	J
HFPO-DA	1.92	0.87	2.0	ng/l	2.00		96	70-130	0.3	30	J
MeFOSAA	1.93	0.58	2.0	ng/l	2.00		96	70-130	5	30	J
PFBS	2.03	0.58	2.0	ng/l	2.00		101	70-130	3	30	
PFDA	1.98	0.45	2.0	ng/l	2.00		99	70-130	3	30	J
PFDa	1.91	0.66	2.0	ng/l	2.00		96	70-130	4	30	J
PFHpA	2.12	0.53	2.0	ng/l	2.00		106	70-130	2	30	
PFHxA	2.04	0.49	2.0	ng/l	2.00		102	70-130	0.3	30	
PFHxS	1.88	0.59	2.0	ng/l	2.00		94	70-130	3	30	J
PFNA	2.08	0.52	2.0	ng/l	2.00		104	70-130	0.1	30	
PFOA	2.17	0.67	2.0	ng/l	2.00		109	70-130	2	30	
PFOS	2.01	0.53	2.0	ng/l	2.00		100	70-130	9	30	
PFTeDA	2.12	0.45	2.0	ng/l	2.00		106	70-130	3	30	
PFTTrDA	1.83	0.42	2.0	ng/l	2.00		91	70-130	2	30	J
PFUnA	1.74	0.48	2.0	ng/l	2.00		87	70-130	3	30	J
<i>Surrogate(s)</i>											
13C2-PFDA	43.2			ng/l	40.0		108	70-130			
13C2-PFHxA	42.1			ng/l	40.0		105	70-130			
d5-EtFOSAA	166			ng/l	160		104	70-130			
HFPO-DA-13C3	39.3			ng/l	40.0		98	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B1243 - EPA 524.2											
Blank (W4B1243-BLK1)						Prepared & Analyzed: 02/15/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1243 - EPA 524.2 (Continued)											
Blank (W4B1243-BLK1)						Prepared & Analyzed: 02/15/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	48.2			ug/l	50.0		96	70-130			
4-Bromofluorobenzene	49.7			ug/l	50.0		99	70-130			
LCS (W4B1243-BS1)						Prepared & Analyzed: 02/15/24					
1,1,1,2-Tetrachloroethane	4.15	0.24	0.50	ug/l	5.00		83	70-130			
1,1,1-Trichloroethane	4.64	0.26	0.50	ug/l	5.00		93	70-130			
1,1,2,2-Tetrachloroethane	4.77	0.20	0.50	ug/l	5.00		95	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1243 - EPA 524.2 (Continued)									
LCS (W4B1243-BS1)					Prepared & Analyzed: 02/15/24				
1,1,2-Trichloroethane	5.00	0.19	0.50	ug/l	5.00		100 70-130		
1,1-Dichloroethane	4.58	0.27	0.50	ug/l	5.00		92 70-130		
1,1-Dichloroethene	4.55	0.16	0.50	ug/l	5.00		91 70-130		
1,1-Dichloropropene	4.73	0.14	0.50	ug/l	5.00		95 70-130		
1,2,3-Trichlorobenzene	4.91	0.40	0.50	ug/l	5.00		98 70-130		
1,2,3-Trichloropropane	4.75	0.22	0.50	ug/l	5.00		95 70-130		
1,2,4-Trichlorobenzene	4.70	0.17	0.50	ug/l	5.00		94 70-130		
1,2,4-Trimethylbenzene	4.06	0.20	0.50	ug/l	5.00		81 70-130		
1,2-Dichloroethane	4.74	0.24	0.50	ug/l	5.00		95 70-130		
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00		95 70-130		
1,3,5-Trimethylbenzene	4.01	0.17	0.50	ug/l	5.00		80 70-130		
1,3-Dichloropropane	4.69	0.27	0.50	ug/l	5.00		94 70-130		
2,2-Dichloropropane	4.29	0.17	0.50	ug/l	5.00		86 70-130		
2-Butanone	4.92	1.5	5.0	ug/l	5.00		98 70-130		J
2-Chlorotoluene	4.26	0.15	0.50	ug/l	5.00		85 70-130		
2-Hexanone	4.34	1.2	5.0	ug/l	5.00		87 70-130		J
4-Chlorotoluene	4.49	0.15	0.50	ug/l	5.00		90 70-130		
4-Methyl-2-pentanone	4.65	1.8	5.0	ug/l	5.00		93 70-130		J
Acetone	53.2	3.1	5.0	ug/l	50.0		106 70-130		
Benzene	4.81	0.15	0.50	ug/l	5.00		96 70-130		
Bromobenzene	4.44	0.15	0.50	ug/l	5.00		89 70-130		
Bromochloromethane	4.64	0.15	0.50	ug/l	5.00		93 70-130		
Bromodichloromethane	4.69	0.24	0.50	ug/l	5.00		94 70-130		
Bromoform	4.83	0.38	0.50	ug/l	5.00		97 70-130		
Bromomethane	4.54	0.27	0.50	ug/l	5.00		91 70-130		
Carbon Disulfide	4.58	0.25	0.50	ug/l	5.00		92 70-130		
Carbon tetrachloride	4.68	0.27	0.50	ug/l	5.00		94 70-130		
Chlorobenzene	3.96	0.15	0.50	ug/l	5.00		79 70-130		
Chloroethane	4.44	0.17	0.50	ug/l	5.00		89 70-130		
Chloroform	4.59	0.27	0.50	ug/l	5.00		92 70-130		
Chloromethane	4.51	0.23	0.50	ug/l	5.00		90 70-130		
cis-1,2-Dichloroethene	4.58	0.25	0.50	ug/l	5.00		92 70-130		
cis-1,3-Dichloropropene	4.65	0.30	0.50	ug/l	5.00		93 70-130		
Dibromochloromethane	4.69	0.20	0.50	ug/l	5.00		94 70-130		
Dibromomethane	4.78	0.20	0.50	ug/l	5.00		96 70-130		
Dichlorodifluoromethane (Freon 12)	4.54	0.45	0.50	ug/l	5.00		91 70-130		
Di-isopropyl ether	20.1	1.1	2.0	ug/l	20.0		100 70-130		
Ethyl tert-butyl ether	19.7	1.0	2.0	ug/l	20.0		99 70-130		
Ethylbenzene	4.34	0.21	0.50	ug/l	5.00		87 70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	Limit	Qualifier
Batch: W4B1243 - EPA 524.2 (Continued)										
LCS (W4B1243-BS1)					Prepared & Analyzed: 02/15/24					
Freon 113	4.57	1.5	5.0	ug/l	5.00	91	70-130			J
Hexachlorobutadiene	4.79	0.40	0.50	ug/l	5.00	96	70-130			
Isopropylbenzene	4.45	0.18	0.50	ug/l	5.00	89	70-130			
m,p-Xylene	4.41	0.33	0.50	ug/l	5.00	88	70-130			
m-Dichlorobenzene	4.58	0.14	0.50	ug/l	5.00	92	70-130			
Methyl tert-butyl ether (MTBE)	19.8	0.94	2.0	ug/l	20.0	99	70-130			
Methylene chloride	4.56	0.30	0.50	ug/l	5.00	91	70-130			
Naphthalene	4.80	0.35	0.50	ug/l	5.00	96	70-130			
n-Butylbenzene	4.41	0.29	0.50	ug/l	5.00	88	70-130			
n-Propylbenzene	4.12	0.18	0.50	ug/l	5.00	82	70-130			
o-Dichlorobenzene	4.70	0.19	0.50	ug/l	5.00	94	70-130			
o-Xylene	4.59	0.20	0.50	ug/l	5.00	92	70-130			
p-Dichlorobenzene	4.55	0.18	0.50	ug/l	5.00	91	70-130			
p-Isopropyltoluene	3.92	0.25	0.50	ug/l	5.00	78	70-130			
sec-Butylbenzene	3.87	0.24	0.50	ug/l	5.00	77	70-130			
Styrene	4.58	0.19	0.50	ug/l	5.00	92	70-130			
Tert-amyl methyl ether	19.1	0.59	2.0	ug/l	20.0	95	70-130			
tert-Butylbenzene	3.81	0.18	0.50	ug/l	5.00	76	70-130			
Tetrachloroethene	4.65	0.18	0.50	ug/l	5.00	93	70-130			
Toluene	4.63	0.29	0.50	ug/l	5.00	93	70-130			
trans-1,2-Dichloroethene	4.64	0.26	0.50	ug/l	5.00	93	70-130			
trans-1,3-Dichloropropene	4.72	0.32	0.50	ug/l	5.00	94	70-130			
Trichloroethene	4.85	0.18	0.50	ug/l	5.00	97	70-130			
Trichlorofluoromethane	4.51	0.18	0.50	ug/l	5.00	90	70-130			
Vinyl chloride	4.47	0.18	0.50	ug/l	5.00	89	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	50.7			ug/l	50.0	101	70-130			
4-Bromofluorobenzene	51.0			ug/l	50.0	102	70-130			
LCS Dup (W4B1243-BSD1)					Prepared & Analyzed: 02/15/24					
1,1,1,2-Tetrachloroethane	4.09	0.24	0.50	ug/l	5.00	82	70-130	1	30	
1,1,1-Trichloroethane	4.89	0.26	0.50	ug/l	5.00	98	70-130	5	30	
1,1,2,2-Tetrachloroethane	4.75	0.20	0.50	ug/l	5.00	95	70-130	0.5	30	
1,1,2-Trichloroethane	5.27	0.19	0.50	ug/l	5.00	105	70-130	5	30	
1,1-Dichloroethane	4.92	0.27	0.50	ug/l	5.00	98	70-130	7	30	
1,1-Dichloroethene	4.74	0.16	0.50	ug/l	5.00	95	70-130	4	30	
1,1-Dichloropropene	4.97	0.14	0.50	ug/l	5.00	99	70-130	5	30	
1,2,3-Trichlorobenzene	5.21	0.40	0.50	ug/l	5.00	104	70-130	6	30	
1,2,3-Trichloropropane	4.51	0.22	0.50	ug/l	5.00	90	70-130	5	30	
1,2,4-Trichlorobenzene	4.83	0.17	0.50	ug/l	5.00	97	70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1243 - EPA 524.2 (Continued)										
LCS Dup (W4B1243-BSD1)					Prepared & Analyzed: 02/15/24					
1,2,4-Trimethylbenzene	4.39	0.20	0.50	ug/l	5.00	88	70-130	8	30	
1,2-Dichloroethane	5.03	0.24	0.50	ug/l	5.00	101	70-130	6	30	
1,2-Dichloropropane	4.99	0.13	0.50	ug/l	5.00	100	70-130	5	30	
1,3,5-Trimethylbenzene	4.26	0.17	0.50	ug/l	5.00	85	70-130	6	30	
1,3-Dichloropropane	5.00	0.27	0.50	ug/l	5.00	100	70-130	6	30	
2,2-Dichloropropane	4.40	0.17	0.50	ug/l	5.00	88	70-130	3	30	
2-Butanone	5.19	1.5	5.0	ug/l	5.00	104	70-130	6	30	
2-Chlorotoluene	4.52	0.15	0.50	ug/l	5.00	90	70-130	6	30	
2-Hexanone	4.75	1.2	5.0	ug/l	5.00	95	70-130	9	30	J
4-Chlorotoluene	4.77	0.15	0.50	ug/l	5.00	95	70-130	6	30	
4-Methyl-2-pentanone	4.69	1.8	5.0	ug/l	5.00	94	70-130	0.9	30	J
Acetone	56.5	3.1	5.0	ug/l	50.0	113	70-130	6	30	
Benzene	5.09	0.15	0.50	ug/l	5.00	102	70-130	6	30	
Bromobenzene	4.59	0.15	0.50	ug/l	5.00	92	70-130	3	30	
Bromochloromethane	4.95	0.15	0.50	ug/l	5.00	99	70-130	7	30	
Bromodichloromethane	5.01	0.24	0.50	ug/l	5.00	100	70-130	7	30	
Bromoform	4.65	0.38	0.50	ug/l	5.00	93	70-130	4	30	
Bromomethane	4.86	0.27	0.50	ug/l	5.00	97	70-130	7	30	
Carbon Disulfide	4.75	0.25	0.50	ug/l	5.00	95	70-130	4	30	
Carbon tetrachloride	4.81	0.27	0.50	ug/l	5.00	96	70-130	3	30	
Chlorobenzene	3.74	0.15	0.50	ug/l	5.00	75	70-130	6	30	
Chloroethane	4.79	0.17	0.50	ug/l	5.00	96	70-130	8	30	
Chloroform	4.77	0.27	0.50	ug/l	5.00	95	70-130	4	30	
Chloromethane	4.82	0.23	0.50	ug/l	5.00	96	70-130	7	30	
cis-1,2-Dichloroethene	4.92	0.25	0.50	ug/l	5.00	98	70-130	7	30	
cis-1,3-Dichloropropene	4.97	0.30	0.50	ug/l	5.00	99	70-130	7	30	
Dibromochloromethane	4.48	0.20	0.50	ug/l	5.00	90	70-130	5	30	
Dibromomethane	5.09	0.20	0.50	ug/l	5.00	102	70-130	6	30	
Dichlorodifluoromethane (Freon 12)	4.60	0.45	0.50	ug/l	5.00	92	70-130	1	30	
Di-isopropyl ether	21.1	1.1	2.0	ug/l	20.0	106	70-130	5	30	
Ethyl tert-butyl ether	20.8	1.0	2.0	ug/l	20.0	104	70-130	5	30	
Ethylbenzene	4.10	0.21	0.50	ug/l	5.00	82	70-130	6	30	
Freon 113	4.70	1.5	5.0	ug/l	5.00	94	70-130	3	30	J
Hexachlorobutadiene	4.99	0.40	0.50	ug/l	5.00	100	70-130	4	30	
Isopropylbenzene	3.98	0.18	0.50	ug/l	5.00	80	70-130	11	30	
m,p-Xylene	4.24	0.33	0.50	ug/l	5.00	85	70-130	4	30	
m-Dichlorobenzene	4.91	0.14	0.50	ug/l	5.00	98	70-130	7	30	
Methyl tert-butyl ether (MTBE)	21.1	0.94	2.0	ug/l	20.0	106	70-130	7	30	
Methylene chloride	4.90	0.30	0.50	ug/l	5.00	98	70-130	7	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1243 - EPA 524.2 (Continued)										
LCS Dup (W4B1243-BSD1)					Prepared & Analyzed: 02/15/24					
Naphthalene	5.02	0.35	0.50	ug/l	5.00	100	70-130	4	30	
n-Butylbenzene	4.51	0.29	0.50	ug/l	5.00	90	70-130	2	30	
n-Propylbenzene	4.16	0.18	0.50	ug/l	5.00	83	70-130	1	30	
o-Dichlorobenzene	4.91	0.19	0.50	ug/l	5.00	98	70-130	4	30	
o-Xylene	4.48	0.20	0.50	ug/l	5.00	90	70-130	3	30	
p-Dichlorobenzene	4.90	0.18	0.50	ug/l	5.00	98	70-130	7	30	
p-Isopropyltoluene	4.17	0.25	0.50	ug/l	5.00	83	70-130	6	30	
sec-Butylbenzene	4.15	0.24	0.50	ug/l	5.00	83	70-130	7	30	
Styrene	4.52	0.19	0.50	ug/l	5.00	90	70-130	1	30	
Tert-amyl methyl ether	20.3	0.59	2.0	ug/l	20.0	102	70-130	6	30	
tert-Butylbenzene	4.16	0.18	0.50	ug/l	5.00	83	70-130	9	30	
Tetrachloroethene	4.78	0.18	0.50	ug/l	5.00	96	70-130	3	30	
Toluene	4.97	0.29	0.50	ug/l	5.00	99	70-130	7	30	
trans-1,2-Dichloroethene	4.92	0.26	0.50	ug/l	5.00	98	70-130	6	30	
trans-1,3-Dichloropropene	5.00	0.32	0.50	ug/l	5.00	100	70-130	6	30	
Trichloroethene	5.11	0.18	0.50	ug/l	5.00	102	70-130	5	30	
Trichlorofluoromethane	4.66	0.18	0.50	ug/l	5.00	93	70-130	3	30	
Vinyl chloride	4.74	0.18	0.50	ug/l	5.00	95	70-130	6	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	50.5			ug/l	50.0	101	70-130			
4-Bromofluorobenzene	48.2			ug/l	50.0	96	70-130			

Batch: W4B1380 - EPA 524.2

Blank (W4B1380-BLK1)					Prepared: 02/16/24 Analyzed: 02/20/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l						
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l						
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l						
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l						
1,1-Dichloroethane	ND	0.27	0.50	ug/l						
1,1-Dichloroethene	ND	0.16	0.50	ug/l						
1,1-Dichloropropene	ND	0.14	0.50	ug/l						
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l						
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l						
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l						
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l						
1,2-Dichloroethane	ND	0.24	0.50	ug/l						
1,2-Dichloropropane	ND	0.13	0.50	ug/l						
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l						
1,3-Dichloropropane	ND	0.27	0.50	ug/l						
1,3-Dichloropropene, Total	ND		0.50	ug/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1380 - EPA 524.2 (Continued)											
Blank (W4B1380-BLK1)						Prepared: 02/16/24 Analyzed: 02/20/24					
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1380 - EPA 524.2 (Continued)									
Blank (W4B1380-BLK1)					Prepared: 02/16/24 Analyzed: 02/20/24				
o-Xylene	ND	0.20	0.50	ug/l					
p-Dichlorobenzene	ND	0.18	0.50	ug/l					
p-Isopropyltoluene	ND	0.25	0.50	ug/l					
sec-Butylbenzene	ND	0.24	0.50	ug/l					
Styrene	ND	0.19	0.50	ug/l					
Tert-amyl methyl ether	ND	0.59	2.0	ug/l					
tert-Butylbenzene	ND	0.18	0.50	ug/l					
Tetrachloroethene	ND	0.18	0.50	ug/l					
THMs, Total	ND		0.50	ug/l					
Toluene	ND	0.29	0.50	ug/l					
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l					
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l					
Trichloroethene	ND	0.18	0.50	ug/l					
Trichlorofluoromethane	ND	0.18	0.50	ug/l					
Vinyl chloride	ND	0.18	0.50	ug/l					
Xylenes, Total	ND	0.33	0.50	ug/l					
<i>Surrogate(s)</i>									
1,2-Dichlorobenzene-d4	0.00			ug/l	10.0		70-130		
4-Bromofluorobenzene	0.00			ug/l	10.0		70-130		
LCS (W4B1380-BS1)					Prepared: 02/16/24 Analyzed: 02/20/24				
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	10.0		70-130		
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	10.0		70-130		
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	10.0		70-130		
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	10.0		70-130		
1,1-Dichloroethane	ND	0.27	0.50	ug/l	10.0		70-130		
1,1-Dichloroethene	ND	0.16	0.50	ug/l	10.0		70-130		
1,1-Dichloropropene	ND	0.14	0.50	ug/l	10.0		70-130		
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	10.0		70-130		
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	10.0		70-130		
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	10.0		70-130		
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	10.0		70-130		
1,2-Dichloroethane	ND	0.24	0.50	ug/l	10.0		70-130		
1,2-Dichloropropane	ND	0.13	0.50	ug/l	10.0		70-130		
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	10.0		70-130		
1,3-Dichloropropane	ND	0.27	0.50	ug/l	10.0		70-130		
2,2-Dichloropropane	ND	0.17	0.50	ug/l	10.0		70-130		
2-Butanone	ND	1.5	5.0	ug/l	10.0		70-130		
2-Chlorotoluene	ND	0.15	0.50	ug/l	10.0		70-130		
2-Hexanone	ND	1.2	5.0	ug/l	10.0		70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	Limit	Qualifier
Batch: W4B1380 - EPA 524.2 (Continued)										
LCS (W4B1380-BS1)					Prepared: 02/16/24 Analyzed: 02/20/24					
4-Chlorotoluene	ND	0.15	0.50	ug/l	10.0		70-130			
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	10.0		70-130			
Acetone	ND	3.1	5.0	ug/l	100		70-130			
Benzene	ND	0.15	0.50	ug/l	10.0		70-130			
Bromobenzene	ND	0.15	0.50	ug/l	10.0		70-130			
Bromochloromethane	ND	0.15	0.50	ug/l	10.0		70-130			
Bromodichloromethane	ND	0.24	0.50	ug/l	10.0		70-130			
Bromoform	ND	0.38	0.50	ug/l	10.0		70-130			
Bromomethane	ND	0.27	0.50	ug/l	10.0		70-130			
Carbon Disulfide	ND	0.25	0.50	ug/l	10.0		70-130			
Carbon tetrachloride	ND	0.27	0.50	ug/l	10.0		70-130			
Chlorobenzene	ND	0.15	0.50	ug/l	10.0		70-130			
Chloroethane	ND	0.17	0.50	ug/l	10.0		70-130			
Chloroform	ND	0.27	0.50	ug/l	10.0		70-130			
Chloromethane	ND	0.23	0.50	ug/l	10.0		70-130			
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	10.0		70-130			
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	10.0		70-130			
Dibromochloromethane	ND	0.20	0.50	ug/l	10.0		70-130			
Dibromomethane	ND	0.20	0.50	ug/l	10.0		70-130			
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	10.0		70-130			
Di-isopropyl ether	ND	1.1	2.0	ug/l	40.0		70-130			
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	40.0		70-130			
Ethylbenzene	ND	0.21	0.50	ug/l	10.0		70-130			
Freon 113	ND	1.5	5.0	ug/l	10.0		70-130			
Hexachlorobutadiene	ND	0.40	0.50	ug/l	10.0		70-130			
Isopropylbenzene	ND	0.18	0.50	ug/l	10.0		70-130			
m,p-Xylene	ND	0.33	0.50	ug/l	10.0		70-130			
m-Dichlorobenzene	ND	0.14	0.50	ug/l	10.0		70-130			
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	40.0		70-130			
Methylene chloride	ND	0.30	0.50	ug/l	10.0		70-130			
Naphthalene	ND	0.35	0.50	ug/l	10.0		70-130			
n-Butylbenzene	ND	0.29	0.50	ug/l	10.0		70-130			
n-Propylbenzene	ND	0.18	0.50	ug/l	10.0		70-130			
o-Dichlorobenzene	ND	0.19	0.50	ug/l	10.0		70-130			
o-Xylene	ND	0.20	0.50	ug/l	10.0		70-130			
p-Dichlorobenzene	ND	0.18	0.50	ug/l	10.0		70-130			
p-Isopropyltoluene	ND	0.25	0.50	ug/l	10.0		70-130			
sec-Butylbenzene	ND	0.24	0.50	ug/l	10.0		70-130			
Styrene	ND	0.19	0.50	ug/l	10.0		70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1380 - EPA 524.2 (Continued)										
LCS (W4B1380-BS1)					Prepared: 02/16/24 Analyzed: 02/20/24					
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	40.0		70-130			
tert-Butylbenzene	ND	0.18	0.50	ug/l	10.0		70-130			
Tetrachloroethene	ND	0.18	0.50	ug/l	10.0		70-130			
Toluene	ND	0.29	0.50	ug/l	10.0		70-130			
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	10.0		70-130			
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	10.0		70-130			
Trichloroethene	ND	0.18	0.50	ug/l	10.0		70-130			
Trichlorofluoromethane	ND	0.18	0.50	ug/l	10.0		70-130			
Vinyl chloride	ND	0.18	0.50	ug/l	10.0		70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.00			ug/l	10.0		70-130			
4-Bromofluorobenzene	0.00			ug/l	10.0		70-130			
LCS Dup (W4B1380-BSD1)					Prepared: 02/16/24 Analyzed: 02/20/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	10.0		70-130		30	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	10.0		70-130		30	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	10.0		70-130		30	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	10.0		70-130		30	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	10.0		70-130		30	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	10.0		70-130		30	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	10.0		70-130		30	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	10.0		70-130		30	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	10.0		70-130		30	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	10.0		70-130		30	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	10.0		70-130		30	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	10.0		70-130		30	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	10.0		70-130		30	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	10.0		70-130		30	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	10.0		70-130		30	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	10.0		70-130		30	
2-Butanone	ND	1.5	5.0	ug/l	10.0		70-130		30	
2-Chlorotoluene	ND	0.15	0.50	ug/l	10.0		70-130		30	
2-Hexanone	ND	1.2	5.0	ug/l	10.0		70-130		30	
4-Chlorotoluene	ND	0.15	0.50	ug/l	10.0		70-130		30	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	10.0		70-130		30	
Acetone	ND	3.1	5.0	ug/l	100		70-130		30	
Benzene	ND	0.15	0.50	ug/l	10.0		70-130		30	
Bromobenzene	ND	0.15	0.50	ug/l	10.0		70-130		30	
Bromochloromethane	ND	0.15	0.50	ug/l	10.0		70-130		30	
Bromodichloromethane	ND	0.24	0.50	ug/l	10.0		70-130		30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1380 - EPA 524.2 (Continued)										
LCS Dup (W4B1380-BSD1)					Prepared: 02/16/24 Analyzed: 02/20/24					
Bromoform	ND	0.38	0.50	ug/l	10.0		70-130		30	
Bromomethane	ND	0.27	0.50	ug/l	10.0		70-130		30	
Carbon Disulfide	ND	0.25	0.50	ug/l	10.0		70-130		30	
Carbon tetrachloride	ND	0.27	0.50	ug/l	10.0		70-130		30	
Chlorobenzene	ND	0.15	0.50	ug/l	10.0		70-130		30	
Chloroethane	ND	0.17	0.50	ug/l	10.0		70-130		30	
Chloroform	ND	0.27	0.50	ug/l	10.0		70-130		30	
Chloromethane	ND	0.23	0.50	ug/l	10.0		70-130		30	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	10.0		70-130		30	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	10.0		70-130		30	
Dibromochloromethane	ND	0.20	0.50	ug/l	10.0		70-130		30	
Dibromomethane	ND	0.20	0.50	ug/l	10.0		70-130		30	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	10.0		70-130		30	
Di-isopropyl ether	ND	1.1	2.0	ug/l	40.0		70-130		30	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	40.0		70-130		30	
Ethylbenzene	ND	0.21	0.50	ug/l	10.0		70-130		30	
Freon 113	ND	1.5	5.0	ug/l	10.0		70-130		30	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	10.0		70-130		30	
Isopropylbenzene	ND	0.18	0.50	ug/l	10.0		70-130		30	
m,p-Xylene	ND	0.33	0.50	ug/l	10.0		70-130		30	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	10.0		70-130		30	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	40.0		70-130		30	
Methylene chloride	ND	0.30	0.50	ug/l	10.0		70-130		30	
Naphthalene	ND	0.35	0.50	ug/l	10.0		70-130		30	
n-Butylbenzene	ND	0.29	0.50	ug/l	10.0		70-130		30	
n-Propylbenzene	ND	0.18	0.50	ug/l	10.0		70-130		30	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	10.0		70-130		30	
o-Xylene	ND	0.20	0.50	ug/l	10.0		70-130		30	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	10.0		70-130		30	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	10.0		70-130		30	
sec-Butylbenzene	ND	0.24	0.50	ug/l	10.0		70-130		30	
Styrene	ND	0.19	0.50	ug/l	10.0		70-130		30	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	40.0		70-130		30	
tert-Butylbenzene	ND	0.18	0.50	ug/l	10.0		70-130		30	
Tetrachloroethene	ND	0.18	0.50	ug/l	10.0		70-130		30	
Toluene	ND	0.29	0.50	ug/l	10.0		70-130		30	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	10.0		70-130		30	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	10.0		70-130		30	
Trichloroethene	ND	0.18	0.50	ug/l	10.0		70-130		30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1380 - EPA 524.2 (Continued)										
LCS Dup (W4B1380-BSD1)					Prepared: 02/16/24 Analyzed: 02/20/24					
Trichlorofluoromethane	ND	0.18	0.50	ug/l	10.0		70-130		30	
Vinyl chloride	ND	0.18	0.50	ug/l	10.0		70-130		30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.00			ug/l	10.0		70-130			
4-Bromofluorobenzene	0.00			ug/l	10.0		70-130			
Batch: W4B1504 - EPA 524.2										
Blank (W4B1504-BLK1)					Prepared & Analyzed: 02/20/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l						
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l						
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l						
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l						
1,1-Dichloroethane	ND	0.27	0.50	ug/l						
1,1-Dichloroethene	ND	0.16	0.50	ug/l						
1,1-Dichloropropene	ND	0.14	0.50	ug/l						
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l						
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l						
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l						
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l						
1,2-Dichloroethane	ND	0.24	0.50	ug/l						
1,2-Dichloropropane	ND	0.13	0.50	ug/l						
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l						
1,3-Dichloropropane	ND	0.27	0.50	ug/l						
1,3-Dichloropropene, Total	ND		0.50	ug/l						
2,2-Dichloropropane	ND	0.17	0.50	ug/l						
2-Butanone	ND	1.5	5.0	ug/l						
2-Chlorotoluene	ND	0.15	0.50	ug/l						
2-Hexanone	ND	1.2	5.0	ug/l						
4-Chlorotoluene	ND	0.15	0.50	ug/l						
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l						
Acetone	ND	3.1	5.0	ug/l						
Acrylonitrile	ND	1.5	2.0	ug/l						
Benzene	ND	0.15	0.50	ug/l						
Bromobenzene	ND	0.15	0.50	ug/l						
Bromochloromethane	ND	0.15	0.50	ug/l						
Bromodichloromethane	ND	0.24	0.50	ug/l						
Bromoform	ND	0.38	0.50	ug/l						
Bromomethane	ND	0.27	0.50	ug/l						
Carbon Disulfide	ND	0.25	0.50	ug/l						
Carbon tetrachloride	ND	0.27	0.50	ug/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B1504 - EPA 524.2 (Continued)										
Blank (W4B1504-BLK1)					Prepared & Analyzed: 02/20/24					
Chlorobenzene	ND	0.15	0.50	ug/l						
Chloroethane	ND	0.17	0.50	ug/l						
Chloroform	ND	0.27	0.50	ug/l						
Chloromethane	ND	0.23	0.50	ug/l						
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l						
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l						
Dibromochloromethane	ND	0.20	0.50	ug/l						
Dibromomethane	ND	0.20	0.50	ug/l						
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l						
Di-isopropyl ether	ND	1.1	2.0	ug/l						
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l						
Ethylbenzene	ND	0.21	0.50	ug/l						
Freon 113	ND	1.5	5.0	ug/l						
Hexachlorobutadiene	ND	0.40	0.50	ug/l						
Isopropylbenzene	ND	0.18	0.50	ug/l						
m,p-Xylene	ND	0.33	0.50	ug/l						
m-Dichlorobenzene	ND	0.14	0.50	ug/l						
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l						
Methylene chloride	ND	0.30	0.50	ug/l						
Naphthalene	0.356	0.35	0.50	ug/l						B-02, J
n-Butylbenzene	ND	0.29	0.50	ug/l						
n-Propylbenzene	ND	0.18	0.50	ug/l						
o-Dichlorobenzene	ND	0.19	0.50	ug/l						
o-Xylene	ND	0.20	0.50	ug/l						
p-Dichlorobenzene	ND	0.18	0.50	ug/l						
p-Isopropyltoluene	ND	0.25	0.50	ug/l						
sec-Butylbenzene	ND	0.24	0.50	ug/l						
Styrene	ND	0.19	0.50	ug/l						
Tert-amyl methyl ether	ND	0.59	2.0	ug/l						
tert-Butylbenzene	ND	0.18	0.50	ug/l						
Tetrachloroethene	ND	0.18	0.50	ug/l						
THMs, Total	ND		0.50	ug/l						
Toluene	ND	0.29	0.50	ug/l						
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l						
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l						
Trichloroethene	ND	0.18	0.50	ug/l						
Trichlorofluoromethane	ND	0.18	0.50	ug/l						
Vinyl chloride	ND	0.18	0.50	ug/l						
Xylenes, Total	ND	0.33	0.50	ug/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1504 - EPA 524.2 (Continued)										
Blank (W4B1504-BLK1)										
Prepared & Analyzed: 02/20/24										
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	43.4			ug/l	50.0		87 70-130			
4-Bromofluorobenzene	43.7			ug/l	50.0		87 70-130			
LCS (W4B1504-BS1)										
Prepared & Analyzed: 02/20/24										
1,1,1,2-Tetrachloroethane	4.36	0.24	0.50	ug/l	5.00		87 70-130			
1,1,1-Trichloroethane	5.07	0.26	0.50	ug/l	5.00		101 70-130			
1,1,2,2-Tetrachloroethane	5.05	0.20	0.50	ug/l	5.00		101 70-130			
1,1,2-Trichloroethane	4.43	0.19	0.50	ug/l	5.00		89 70-130			
1,1-Dichloroethane	5.11	0.27	0.50	ug/l	5.00		102 70-130			
1,1-Dichloroethene	4.95	0.16	0.50	ug/l	5.00		99 70-130			
1,1-Dichloropropene	5.00	0.14	0.50	ug/l	5.00		100 70-130			
1,2,3-Trichlorobenzene	5.06	0.40	0.50	ug/l	5.00		101 70-130			
1,2,3-Trichloropropane	5.04	0.22	0.50	ug/l	5.00		101 70-130			
1,2,4-Trichlorobenzene	5.30	0.17	0.50	ug/l	5.00		106 70-130			
1,2,4-Trimethylbenzene	5.07	0.20	0.50	ug/l	5.00		101 70-130			
1,2-Dichloroethane	4.99	0.24	0.50	ug/l	5.00		100 70-130			
1,2-Dichloropropane	5.01	0.13	0.50	ug/l	5.00		100 70-130			
1,3,5-Trimethylbenzene	5.01	0.17	0.50	ug/l	5.00		100 70-130			
1,3-Dichloropropane	4.72	0.27	0.50	ug/l	5.00		94 70-130			
2,2-Dichloropropane	5.93	0.17	0.50	ug/l	5.00		119 70-130			
2-Butanone	4.77	1.5	5.0	ug/l	5.00		95 70-130			J
2-Chlorotoluene	5.36	0.15	0.50	ug/l	5.00		107 70-130			
2-Hexanone	4.62	1.2	5.0	ug/l	5.00		92 70-130			J
4-Chlorotoluene	5.31	0.15	0.50	ug/l	5.00		106 70-130			
4-Methyl-2-pentanone	4.52	1.8	5.0	ug/l	5.00		90 70-130			J
Acetone	52.8	3.1	5.0	ug/l	50.0		106 70-130			
Benzene	5.12	0.15	0.50	ug/l	5.00		102 70-130			
Bromobenzene	5.06	0.15	0.50	ug/l	5.00		101 70-130			
Bromochloromethane	5.00	0.15	0.50	ug/l	5.00		100 70-130			
Bromodichloromethane	4.75	0.24	0.50	ug/l	5.00		95 70-130			
Bromoform	4.89	0.38	0.50	ug/l	5.00		98 70-130			
Bromomethane	4.76	0.27	0.50	ug/l	5.00		95 70-130			
Carbon Disulfide	5.16	0.25	0.50	ug/l	5.00		103 70-130			
Carbon tetrachloride	5.06	0.27	0.50	ug/l	5.00		101 70-130			
Chlorobenzene	4.55	0.15	0.50	ug/l	5.00		91 70-130			
Chloroethane	5.36	0.17	0.50	ug/l	5.00		107 70-130			
Chloroform	4.95	0.27	0.50	ug/l	5.00		99 70-130			
Chloromethane	5.70	0.23	0.50	ug/l	5.00		114 70-130			
cis-1,2-Dichloroethene	5.11	0.25	0.50	ug/l	5.00		102 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1504 - EPA 524.2 (Continued)										
LCS (W4B1504-BS1)					Prepared & Analyzed: 02/20/24					
cis-1,3-Dichloropropene	4.94	0.30	0.50	ug/l	5.00	99	70-130			
Dibromochloromethane	4.62	0.20	0.50	ug/l	5.00	92	70-130			
Dibromomethane	4.91	0.20	0.50	ug/l	5.00	98	70-130			
Dichlorodifluoromethane (Freon 12)	5.26	0.45	0.50	ug/l	5.00	105	70-130			
Di-isopropyl ether	21.1	1.1	2.0	ug/l	20.0	106	70-130			
Ethyl tert-butyl ether	18.9	1.0	2.0	ug/l	20.0	94	70-130			
Ethylbenzene	4.30	0.21	0.50	ug/l	5.00	86	70-130			
Freon 113	5.08	1.5	5.0	ug/l	5.00	102	70-130			
Hexachlorobutadiene	5.35	0.40	0.50	ug/l	5.00	107	70-130			
Isopropylbenzene	4.84	0.18	0.50	ug/l	5.00	97	70-130			
m,p-Xylene	4.52	0.33	0.50	ug/l	5.00	90	70-130			
m-Dichlorobenzene	5.12	0.14	0.50	ug/l	5.00	102	70-130			
Methyl tert-butyl ether (MTBE)	20.1	0.94	2.0	ug/l	20.0	100	70-130			
Methylene chloride	4.90	0.30	0.50	ug/l	5.00	98	70-130			
Naphthalene	4.83	0.35	0.50	ug/l	5.00	97	70-130			
n-Butylbenzene	5.49	0.29	0.50	ug/l	5.00	110	70-130			
n-Propylbenzene	4.97	0.18	0.50	ug/l	5.00	99	70-130			
o-Dichlorobenzene	4.97	0.19	0.50	ug/l	5.00	99	70-130			
o-Xylene	4.95	0.20	0.50	ug/l	5.00	99	70-130			
p-Dichlorobenzene	5.19	0.18	0.50	ug/l	5.00	104	70-130			
p-Isopropyltoluene	5.08	0.25	0.50	ug/l	5.00	102	70-130			
sec-Butylbenzene	5.03	0.24	0.50	ug/l	5.00	101	70-130			
Styrene	5.15	0.19	0.50	ug/l	5.00	103	70-130			
Tert-amyl methyl ether	19.2	0.59	2.0	ug/l	20.0	96	70-130			
tert-Butylbenzene	4.93	0.18	0.50	ug/l	5.00	99	70-130			
Tetrachloroethene	4.70	0.18	0.50	ug/l	5.00	94	70-130			
Toluene	4.55	0.29	0.50	ug/l	5.00	91	70-130			
trans-1,2-Dichloroethene	5.13	0.26	0.50	ug/l	5.00	103	70-130			
trans-1,3-Dichloropropene	4.90	0.32	0.50	ug/l	5.00	98	70-130			
Trichloroethene	5.02	0.18	0.50	ug/l	5.00	100	70-130			
Trichlorofluoromethane	5.20	0.18	0.50	ug/l	5.00	104	70-130			
Vinyl chloride	5.33	0.18	0.50	ug/l	5.00	107	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	50.6			ug/l	50.0	101	70-130			
4-Bromofluorobenzene	49.8			ug/l	50.0	100	70-130			
LCS Dup (W4B1504-BS1)					Prepared & Analyzed: 02/20/24					
1,1,1,2-Tetrachloroethane	4.92	0.24	0.50	ug/l	5.00	98	70-130	12	30	
1,1,1-Trichloroethane	4.90	0.26	0.50	ug/l	5.00	98	70-130	4	30	
1,1,2,2-Tetrachloroethane	5.01	0.20	0.50	ug/l	5.00	100	70-130	0.8	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1504 - EPA 524.2 (Continued)										
LCS Dup (W4B1504-BSD1)					Prepared & Analyzed: 02/20/24					
1,1,2-Trichloroethane	4.97	0.19	0.50	ug/l	5.00	99	70-130	11	30	
1,1-Dichloroethane	5.00	0.27	0.50	ug/l	5.00	100	70-130	2	30	
1,1-Dichloroethene	4.91	0.16	0.50	ug/l	5.00	98	70-130	0.9	30	
1,1-Dichloropropene	4.75	0.14	0.50	ug/l	5.00	95	70-130	5	30	
1,2,3-Trichlorobenzene	5.20	0.40	0.50	ug/l	5.00	104	70-130	3	30	
1,2,3-Trichloropropane	4.92	0.22	0.50	ug/l	5.00	98	70-130	2	30	
1,2,4-Trichlorobenzene	5.33	0.17	0.50	ug/l	5.00	107	70-130	0.6	30	
1,2,4-Trimethylbenzene	4.96	0.20	0.50	ug/l	5.00	99	70-130	2	30	
1,2-Dichloroethane	4.91	0.24	0.50	ug/l	5.00	98	70-130	2	30	
1,2-Dichloropropane	4.99	0.13	0.50	ug/l	5.00	100	70-130	0.4	30	
1,3,5-Trimethylbenzene	4.90	0.17	0.50	ug/l	5.00	98	70-130	2	30	
1,3-Dichloropropane	5.21	0.27	0.50	ug/l	5.00	104	70-130	10	30	
2,2-Dichloropropane	5.68	0.17	0.50	ug/l	5.00	114	70-130	4	30	
2-Butanone	5.21	1.5	5.0	ug/l	5.00	104	70-130	9	30	
2-Chlorotoluene	5.18	0.15	0.50	ug/l	5.00	104	70-130	3	30	
2-Hexanone	5.29	1.2	5.0	ug/l	5.00	106	70-130	14	30	
4-Chlorotoluene	5.14	0.15	0.50	ug/l	5.00	103	70-130	3	30	
4-Methyl-2-pentanone	5.31	1.8	5.0	ug/l	5.00	106	70-130	16	30	
Acetone	55.0	3.1	5.0	ug/l	50.0	110	70-130	4	30	
Benzene	5.04	0.15	0.50	ug/l	5.00	101	70-130	2	30	
Bromobenzene	5.06	0.15	0.50	ug/l	5.00	101	70-130	0.004	30	
Bromochloromethane	4.99	0.15	0.50	ug/l	5.00	100	70-130	0.2	30	
Bromodichloromethane	5.15	0.24	0.50	ug/l	5.00	103	70-130	8	30	
Bromoform	4.86	0.38	0.50	ug/l	5.00	97	70-130	0.5	30	
Bromomethane	4.74	0.27	0.50	ug/l	5.00	95	70-130	0.5	30	
Carbon Disulfide	4.99	0.25	0.50	ug/l	5.00	100	70-130	3	30	
Carbon tetrachloride	4.76	0.27	0.50	ug/l	5.00	95	70-130	6	30	
Chlorobenzene	5.19	0.15	0.50	ug/l	5.00	104	70-130	13	30	
Chloroethane	5.26	0.17	0.50	ug/l	5.00	105	70-130	2	30	
Chloroform	4.85	0.27	0.50	ug/l	5.00	97	70-130	2	30	
Chloromethane	5.65	0.23	0.50	ug/l	5.00	113	70-130	0.8	30	
cis-1,2-Dichloroethene	4.99	0.25	0.50	ug/l	5.00	100	70-130	2	30	
cis-1,3-Dichloropropene	5.24	0.30	0.50	ug/l	5.00	105	70-130	6	30	
Dibromochloromethane	5.01	0.20	0.50	ug/l	5.00	100	70-130	8	30	
Dibromomethane	4.81	0.20	0.50	ug/l	5.00	96	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	5.00	0.45	0.50	ug/l	5.00	100	70-130	5	30	
Di-isopropyl ether	21.4	1.1	2.0	ug/l	20.0	107	70-130	1	30	
Ethyl tert-butyl ether	18.1	1.0	2.0	ug/l	20.0	90	70-130	4	30	
Ethylbenzene	4.81	0.21	0.50	ug/l	5.00	96	70-130	11	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/06/2024 08:57

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1504 - EPA 524.2 (Continued)										
LCS Dup (W4B1504-BSD1)					Prepared & Analyzed: 02/20/24					
Freon 113	4.99	1.5	5.0	ug/l	5.00		100 70-130	2	30	J
Hexachlorobutadiene	5.16	0.40	0.50	ug/l	5.00		103 70-130	4	30	
Isopropylbenzene	4.73	0.18	0.50	ug/l	5.00		95 70-130	2	30	
m,p-Xylene	4.95	0.33	0.50	ug/l	5.00		99 70-130	9	30	
m-Dichlorobenzene	5.01	0.14	0.50	ug/l	5.00		100 70-130	2	30	
Methyl tert-butyl ether (MTBE)	20.1	0.94	2.0	ug/l	20.0		100 70-130	0.006	30	
Methylene chloride	5.01	0.30	0.50	ug/l	5.00		100 70-130	2	30	
Naphthalene	5.04	0.35	0.50	ug/l	5.00		101 70-130	4	30	
n-Butylbenzene	5.33	0.29	0.50	ug/l	5.00		107 70-130	3	30	
n-Propylbenzene	4.86	0.18	0.50	ug/l	5.00		97 70-130	2	30	
o-Dichlorobenzene	4.91	0.19	0.50	ug/l	5.00		98 70-130	1	30	
o-Xylene	4.88	0.20	0.50	ug/l	5.00		98 70-130	1	30	
p-Dichlorobenzene	5.24	0.18	0.50	ug/l	5.00		105 70-130	1	30	
p-Isopropyltoluene	4.94	0.25	0.50	ug/l	5.00		99 70-130	3	30	
sec-Butylbenzene	4.86	0.24	0.50	ug/l	5.00		97 70-130	3	30	
Styrene	5.04	0.19	0.50	ug/l	5.00		101 70-130	2	30	
Tert-amyl methyl ether	18.0	0.59	2.0	ug/l	20.0		90 70-130	6	30	
tert-Butylbenzene	4.78	0.18	0.50	ug/l	5.00		96 70-130	3	30	
Tetrachloroethene	4.99	0.18	0.50	ug/l	5.00		100 70-130	6	30	
Toluene	4.95	0.29	0.50	ug/l	5.00		99 70-130	8	30	
trans-1,2-Dichloroethene	4.98	0.26	0.50	ug/l	5.00		100 70-130	3	30	
trans-1,3-Dichloropropene	5.37	0.32	0.50	ug/l	5.00		107 70-130	9	30	
Trichloroethene	4.89	0.18	0.50	ug/l	5.00		98 70-130	3	30	
Trichlorofluoromethane	4.94	0.18	0.50	ug/l	5.00		99 70-130	5	30	
Vinyl chloride	5.16	0.18	0.50	ug/l	5.00		103 70-130	3	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	50.4			ug/l	50.0		101 70-130			
4-Bromofluorobenzene	49.8			ug/l	50.0		100 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/06/2024 08:57

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B06193

Report Date: 4/08/2024

Received Date: 2/6/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

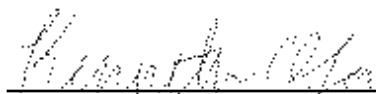
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/06/24 with the Chain-of-Custody document. The samples were received in good condition, at 4.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:23

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-RO#4-515	Windsor Lee	4B06193-01	Water	02/06/24 12:15	
PT-RO#2-515	Windsor Lee	4B06193-02	Water	02/06/24 13:00	
PT-RO#4-514	Windsor Lee	4B06193-03	Water	02/06/24 13:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Magnesium, Total	7439-95-4			⊗
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:23

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-RO#4-515

Sampled: 02/06/24 12:15 by Windsor Lee

4B06193-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B0616	Preparation: _NONE (LC)		Prepared: 02/08/24 08:25		Analyst: CAM		
Chloride, Total	1.8	0.19	0.50	mg/l	1	02/09/24	
Fluoride, Total	0.021	0.0090	0.10	mg/l	1	02/09/24	J
Sulfate as SO4	0.83	0.24	0.50	mg/l	1	02/09/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4B2177	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:54		Analyst: aln		
Aggressive Index	6.44			AGI	1	02/27/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B0464	Preparation: _NONE (WETCHEM)		Prepared: 02/06/24 18:56		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/06/24 19:53	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4B1848	Preparation: _NONE (WETCHEM)		Prepared: 02/22/24 11:00		Analyst: YMT		
Ammonia as N	0.058	0.017	0.10	mg/l	1	02/29/24	J
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B0589	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 15:59		Analyst: ISM		
Nitrate as N	0.17	0.040	0.20	mg/l	1	02/07/24 17:32	J
Nitrite as N	ND	42	100	ug/l	1	02/07/24 17:32	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B0569	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 14:04		Analyst: hhl		
Color	ND		3.0	Color Units	1	02/07/24 15:38	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B0603	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 17:13		Analyst: mes		
Alkalinity as CaCO3	12	7.2	20	mg/l	1	02/08/24	J
Bicarbonate Alkalinity as HCO3	15	8.8	24	mg/l	1	02/08/24	J
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2172	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:30		Analyst: aln		
Langelier Index @ 20 C	-5.23	-20.0	-10.0	LSI	1	02/27/24	
Langelier Index @ 60 C	-4.70	-20.0	-10.0	LSI	1	02/27/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2178	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:56		Analyst: aln		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-RO#4-515

Sampled: 02/06/24 12:15 by Windsor Lee

4B06193-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4B2178	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:56		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	-129	-200	-200	N/A	1	02/27/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B0610	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 18:26		Analyst: bel		
Total Dissolved Solids	19	4.0	10	mg/l	1	02/08/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B0498	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 10:05		Analyst: mes		
pH	5.56	0.10	0.10	pH Units	1	02/07/24 12:08	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/22/24 10:56		Analyst: kvm		
Hardness as CaCO3, Total	ND	0.121	3.31	mg/l		02/23/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B1846	Preparation: EPA 200.2		Prepared: 02/22/24 10:56		Analyst: kvm		
Boron, Total	70	1.3	10	ug/l	1	02/23/24	
Calcium, Total	0.252	0.0240	0.500	mg/l	1	02/23/24	J
Magnesium, Total	0.111	0.0148	0.500	mg/l	1	02/23/24	J
Silica as SiO2, Dissolved	0.50	0.0086	0.10	mg/l	1	02/23/24	
Silica as SiO2, Total	0.50	0.0086	0.10	mg/l	1	02/23/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1851	Preparation: EPA 200.2		Prepared: 02/22/24 13:25		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	ND	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	ND	0.14	1.0	ug/l	1	02/26/24	
Calcium, Total	0.28	0.051	0.50	mg/l	1	02/26/24	J
Copper, Total	7.7	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	0.78	0.083	0.20	ug/l	1	02/26/24	
Magnesium, Total	0.11	0.050	0.50	mg/l	1	02/26/24	J
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	0.20	0.068	0.50	mg/l	1	02/26/24	J
Selenium, Total	ND	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	6.9	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	1.2	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:23

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-RO#4-515

Sampled: 02/06/24 12:15 by Windsor Lee

4B06193-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1851		Preparation: EPA 200.2		Prepared: 02/22/24 13:25		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B0515		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/06/24 17:34		Analyst: atd	
Heterotrophic Plate Count	2.0	2.0	2.0	MPN/mL	1	02/08/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B0516		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/06/24 18:33		Analyst: slh	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/08/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-RO#2-515

Sampled: 02/06/24 13:00 by Windsor Lee

4B06193-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B0616	Preparation: _NONE (LC)		Prepared: 02/08/24 08:25		Analyst: CAM		
Chloride, Total	5.6	0.19	0.50	mg/l	1	02/09/24	
Fluoride, Total	0.026	0.0090	0.10	mg/l	1	02/09/24	J
Sulfate as SO4	3.6	0.24	0.50	mg/l	1	02/09/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4B2177	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:54		Analyst: aln		
Aggressive Index	7.22			AGI	1	02/27/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B0464	Preparation: _NONE (WETCHEM)		Prepared: 02/06/24 18:56		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/06/24 19:53	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4B1848	Preparation: _NONE (WETCHEM)		Prepared: 02/22/24 11:00		Analyst: YMT		
Ammonia as N	0.067	0.017	0.10	mg/l	1	02/29/24	J
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B0589	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 15:59		Analyst: ISM		
Nitrate as N	0.30	0.040	0.20	mg/l	1	02/07/24 17:43	
Nitrite as N	ND	42	100	ug/l	1	02/07/24 17:43	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B0569	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 14:04		Analyst: hhl		
Color	ND		3.0	Color Units	1	02/07/24 15:38	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B0603	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 17:13		Analyst: mes		
Alkalinity as CaCO3	16	7.2	20	mg/l	1	02/08/24	J
Bicarbonate Alkalinity as HCO3	19	8.8	24	mg/l	1	02/08/24	J
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2172	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:30		Analyst: aln		
Langelier Index @ 20 C	-4.46	-20.0	-10.0	LSI	1	02/27/24	
Langelier Index @ 60 C	-3.93	-20.0	-10.0	LSI	1	02/27/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2178	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:56		Analyst: aln		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-RO#2-515

Sampled: 02/06/24 13:00 by Windsor Lee

4B06193-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4B2178	Preparation: _NONE (METALS)			Prepared: 02/27/24 10:56		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	-181	-200	-200	N/A	1	02/27/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B0610	Preparation: _NONE (WETCHEM)			Prepared: 02/07/24 18:26		Analyst: bel	
Total Dissolved Solids	34	4.0	10	mg/l	1	02/08/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B0498	Preparation: _NONE (WETCHEM)			Prepared: 02/07/24 10:05		Analyst: mes	
pH	5.47	0.10	0.10	pH Units	1	02/07/24 12:11	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 02/22/24 10:56		Analyst: kvm	
Hardness as CaCO3, Total	6.05	0.121	3.31	mg/l		02/23/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B1846	Preparation: EPA 200.2			Prepared: 02/22/24 10:56		Analyst: kvm	
Boron, Total	78	1.3	10	ug/l	1	02/23/24	
Calcium, Total	1.42	0.0240	0.500	mg/l	1	02/23/24	
Magnesium, Total	0.606	0.0148	0.500	mg/l	1	02/23/24	
Silica as SiO2, Dissolved	1.6	0.0086	0.10	mg/l	1	02/23/24	
Silica as SiO2, Total	1.5	0.0086	0.10	mg/l	1	02/23/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1851	Preparation: EPA 200.2			Prepared: 02/22/24 13:25		Analyst: tyc	
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	ND	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	0.67	0.14	1.0	ug/l	1	02/26/24	J
Calcium, Total	1.4	0.051	0.50	mg/l	1	02/26/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Magnesium, Total	0.59	0.050	0.50	mg/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	0.30	0.068	0.50	mg/l	1	02/26/24	J
Selenium, Total	ND	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	10	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	7.1	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-RO#2-515

Sampled: 02/06/24 13:00 by Windsor Lee

4B06193-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B1851		Preparation: EPA 200.2		Prepared: 02/22/24 13:25		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B0515		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/06/24 17:34		Analyst: atd	
Heterotrophic Plate Count	21	2.0	2.0	MPN/mL	1	02/08/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B0516		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/06/24 18:33		Analyst: slh	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/08/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4-514

Sampled: 02/06/24 13:00 by Windsor Lee

4B06193-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B0616	Preparation: _NONE (LC)		Prepared: 02/08/24 08:25		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/09/24	
Fluoride, Total	0.30	0.0090	0.10	mg/l	1	02/09/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4B2177	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:54		Analyst: aln		
Aggressive Index	11.6			AGI	1	02/27/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B0464	Preparation: _NONE (WETCHEM)		Prepared: 02/06/24 18:56		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/06/24 19:53	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4B1848	Preparation: _NONE (WETCHEM)		Prepared: 02/22/24 11:00		Analyst: YMT		
Ammonia as N	0.27	0.017	0.10	mg/l	1	02/29/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B0589	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 15:59		Analyst: ISM		
Nitrate as N	1.8	0.040	0.20	mg/l	1	02/07/24 17:45	
Nitrite as N	ND	42	100	ug/l	1	02/07/24 17:45	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO4, Total	0.22	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B0569	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 14:04		Analyst: hhl		
Color	ND		3.0	Color Units	1	02/07/24 15:38	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B0603	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 17:13		Analyst: mes		
Alkalinity as CaCO3	220	7.2	20	mg/l	1	02/08/24	
Bicarbonate Alkalinity as HCO3	270	8.8	24	mg/l	1	02/08/24	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2172	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:30		Analyst: aln		
Langelier Index @ 20 C	-0.364	-20.0	-10.0	LSI	1	02/27/24	
Langelier Index @ 60 C	0.147	-20.0	-10.0	LSI	1	02/27/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2178	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:56		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	-35.0	-200	-200	N/A	1	02/27/24	A-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#4-514

Sampled: 02/06/24 13:00 by Windsor Lee

4B06193-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B							
Batch ID: W4B2178	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2540C							
Batch ID: W4B0610	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	950	4.0	10	mg/l	1	02/08/24	
Method: SM 4500H+-B							
Batch ID: W4B0498	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	6.73	0.10	0.10	pH Units	1	02/07/24 12:14	*

Metals by EPA 200 Series Methods

Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	543	0.121	3.31	mg/l		02/23/24	
Method: EPA 200.7							
Batch ID: W4B1846	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	110	1.3	10	ug/l	1	02/23/24	
Calcium, Total	128	0.0240	0.500	mg/l	1	02/23/24	
Magnesium, Total	54.5	0.0148	0.500	mg/l	1	02/23/24	
Silica as SiO2, Dissolved	41	0.0086	0.10	mg/l	1	02/23/24	
Silica as SiO2, Total	41	0.0086	0.10	mg/l	1	02/23/24	
Method: EPA 200.8							
Batch ID: W4B1851	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	5.2	4.4	20	ug/l	1	02/26/24	J
Arsenic, Total	1.3	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	65	0.14	1.0	ug/l	1	02/26/24	
Calcium, Total	120	0.051	0.50	mg/l	1	02/26/24	
Copper, Total	2.3	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	0.12	0.083	0.20	ug/l	1	02/26/24	J
Magnesium, Total	52	0.050	0.50	mg/l	1	02/26/24	
Manganese, Dissolved	3.6	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	3.5	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	2.8	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	3.3	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	91	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	710	0.036	0.20	ug/l	1	02/26/24	

Microbiological Parameters by Standard Methods

4B06193

Page 10 of 24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-RO#4-514

Sampled: 02/06/24 13:00 by Windsor Lee

4B06193-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods (Continued)							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B0515		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/06/24 17:34		Analyst: atd	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/08/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B0516		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/06/24 18:33		Analyst: slh	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/08/24	

Sample Results

(Continued)

Sample: PT-RO#4-514

Sampled: 02/06/24 13:00 by Windsor Lee

4B06193-03RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B0616		Preparation: _NONE (LC)		Prepared: 02/08/24 08:25		Analyst: CAM	
Sulfate as SO ₄	370	0.96	2.0	mg/l	4	02/10/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Sample Results BSK Associates Laboratory Fresno

Sample: PT-RO#4-515
4B06193-01 (Water)

Sampled: 02/06/24 12:15 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/04/24	HT1.0
Chlorate	8.7		5.0	ug/L	1	03/04/24	
<i>Surrogate(s)</i>							
Dichloroacetate	101%		90-115			03/04/24	HT1.0
Dichloroacetate	101%		90-115			03/04/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	HT1.3

General Chemistry

Method: EPA 300.0							
Bromide	0.22		0.010	mg/L	1	03/02/24	

Sample: PT-RO#2-515
4B06193-02 (Water)

Sampled: 02/06/24 13:00 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/05/24	HT1.0
Chlorate	12		5.0	ug/L	1	03/05/24	
<i>Surrogate(s)</i>							
Dichloroacetate	105%		90-115			03/05/24	HT1.0
Dichloroacetate	105%		90-115			03/05/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/07/24	HT1.3

General Chemistry

Method: EPA 300.0							
Bromide	0.20		0.010	mg/L	1	03/02/24	MS1.2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Sample Results BSK Associates Laboratory Fresno (Continued)

Sample: PT-RO#4-514
4B06193-03 (Water)

Sampled: 02/06/24 13:00 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0219		Prepared: 03/05/24 20:28			Analyst: DXR	
Chlorite	ND		0.0050	mg/L	1	03/05/24	HT1.0
Chlorate	210		5.0	ug/L	1	03/05/24	
<i>Surrogate(s)</i>							
Dichloroacetate	102%		90-115			03/05/24	HT1.0
Dichloroacetate	102%		90-115			03/05/24	
Method: EPA 317.0	Batch ID: AHC0135		Prepared: 03/07/24 18:49			Analyst: DXR	
Bromate	ND		1.0	ug/L	1	03/07/24	HT1.3
General Chemistry							
Method: EPA 300.0	Batch ID: AHC0061		Prepared: 03/01/24 16:22			Analyst: AAS	
Bromide	0.56		0.010	mg/L	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: AHC0125 - EPA 300.1									
Blank (AHC0125-BLK1) Prepared & Analyzed: 03/04/24									
Chlorate	ND	5.0	ug/L						
Chlorite	ND	0.0050	mg/L						
<i>Surrogate(s)</i>									
Dichloroacetate	0.511		mg/L	0.500		102 90-115			
Dichloroacetate	511		ug/L	500		102 90-115			
LCS (AHC0125-BS1) Prepared & Analyzed: 03/04/24									
Chlorate	200	5.0	ug/L	200		99 85-115			
Chlorite	0.20	0.0050	mg/L	0.200		100 85-115			
<i>Surrogate(s)</i>									
Dichloroacetate	0.509		mg/L	0.500		102 90-115			
Dichloroacetate	509		ug/L	500		102 90-115			
LCS Dup (AHC0125-BSD1) Prepared & Analyzed: 03/04/24									
Chlorate	200	5.0	ug/L	200		99 85-115	0.1	10	
Chlorite	0.20	0.0050	mg/L	0.200		102 85-115	2	10	
<i>Surrogate(s)</i>									
Dichloroacetate	0.515		mg/L	0.500		103 90-115			
Dichloroacetate	515		ug/L	500		103 90-115			
Matrix Spike (AHC0125-MS1) Source: AHB3708-01 Prepared & Analyzed: 03/04/24									
Chlorate	97	5.0	ug/L	100	1.4	96 75-125			
Chlorite	0.095	0.0050	mg/L	0.100	ND	95 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.511		mg/L	0.500		102 90-115			
Dichloroacetate	511		ug/L	500		102 90-115			
Matrix Spike Dup (AHC0125-MSD1) Source: AHB3708-01 Prepared & Analyzed: 03/04/24									
Chlorate	98	5.0	ug/L	100	1.4	97 75-125	0.7	10	
Chlorite	0.099	0.0050	mg/L	0.100	ND	99 75-125	3	10	
<i>Surrogate(s)</i>									
Dichloroacetate	0.520		mg/L	0.500		104 90-115			
Dichloroacetate	520		ug/L	500		104 90-115			
Batch: AHC0135 - EPA 317.0									
Blank (AHC0135-BLK1) Prepared & Analyzed: 03/07/24									
Bromate	ND	1.0	ug/L						
LCS (AHC0135-BS1) Prepared & Analyzed: 03/07/24									
Bromate	9.8	1.0	ug/L	10.0		98 85-115			
LCS Dup (AHC0135-BSD1) Prepared & Analyzed: 03/07/24									
Bromate	9.9	1.0	ug/L	10.0		99 85-115	1	10	
Matrix Spike (AHC0135-MS1) Source: AHB3420-02 Prepared & Analyzed: 03/07/24									
Bromate	9.5	1.0	ug/L	10.0	ND	95 75-125			
Matrix Spike Dup (AHC0135-MSD1) Source: AHB3420-02 Prepared & Analyzed: 03/07/24									
Bromate	9.7	1.0	ug/L	10.0	ND	97 75-125	2	10	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: AHC0219 - EPA 300.1										
Blank (AHC0219-BLK1)										
Prepared & Analyzed: 03/05/24										
Chlorate	ND	5.0	ug/L							
Chlorite	ND	0.0050	mg/L							
<i>Surrogate(s)</i>										
Dichloroacetate	0.508		mg/L	0.500		102	90-115			
Dichloroacetate	508		ug/L	500		102	90-115			
LCS (AHC0219-BS1)										
Prepared & Analyzed: 03/05/24										
Chlorate	200	5.0	ug/L	200		100	85-115			
Chlorite	0.21	0.0050	mg/L	0.200		105	85-115			
<i>Surrogate(s)</i>										
Dichloroacetate	0.512		mg/L	0.500		102	90-115			
Dichloroacetate	512		ug/L	500		102	90-115			
LCS Dup (AHC0219-BSD1)										
Prepared & Analyzed: 03/05/24										
Chlorate	200	5.0	ug/L	200		100	85-115	0.1	10	
Chlorite	0.21	0.0050	mg/L	0.200		103	85-115	2	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.525		mg/L	0.500		105	90-115			
Dichloroacetate	525		ug/L	500		105	90-115			
Matrix Spike (AHC0219-MS1)										
Source: AHB3420-01										
Prepared & Analyzed: 03/05/24										
Chlorate	100	5.0	ug/L	100	ND	104	75-125			
Chlorite	0.10	0.0050	mg/L	0.100	ND	104	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.549		mg/L	0.500		110	90-115			
Dichloroacetate	549		ug/L	500		110	90-115			
Matrix Spike (AHC0219-MS2)										
Source: AHC0050-01										
Prepared & Analyzed: 03/06/24										
Chlorate	100	5.0	ug/L	100	ND	105	75-125			
Chlorite	0.097	0.0050	mg/L	0.100	ND	97	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.521		mg/L	0.500		104	90-115			
Dichloroacetate	521		ug/L	500		104	90-115			
Matrix Spike Dup (AHC0219-MSD1)										
Source: AHB3420-01										
Prepared & Analyzed: 03/05/24										
Chlorate	99	5.0	ug/L	100	ND	99	75-125	5	10	
Chlorite	0.10	0.0050	mg/L	0.100	ND	105	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.555		mg/L	0.500		111	90-115			
Dichloroacetate	555		ug/L	500		111	90-115			
Matrix Spike Dup (AHC0219-MSD2)										
Source: AHC0050-01										
Prepared & Analyzed: 03/06/24										
Chlorate	100	5.0	ug/L	100	ND	104	75-125	0.9	10	
Chlorite	0.096	0.0050	mg/L	0.100	ND	96	75-125	1	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.509		mg/L	0.500		102	90-115			
Dichloroacetate	509		ug/L	500		102	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: AHC0061 - EPA 300.0									
Blank (AHC0061-BLK1) Prepared & Analyzed: 03/01/24									
Bromide	ND	0.010	mg/L						
LCS (AHC0061-BS1) Prepared: 03/01/24 Analyzed: 03/02/24									
Bromide	0.19	0.010	mg/L	0.200		93 90-110			
Matrix Spike (AHC0061-MS1) Source: 4B06193-02 Prepared: 03/01/24 Analyzed: 03/02/24									
Bromide	0.28	0.010	mg/L	0.100	0.20	74 80-120			MS1.0
Matrix Spike Dup (AHC0061-MSD1) Source: 4B06193-02 Prepared: 03/01/24 Analyzed: 03/02/24									
Bromide	0.28	0.010	mg/L	0.100	0.20	76 80-120	0.7	10	MS1.0

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B0616 - EPA 300.0										
Blank (W4B0616-BLK1) Prepared: 02/08/24 Analyzed: 02/09/24										
Chloride, Total	ND	0.19	0.50	mg/l						
Fluoride, Total	ND	0.0090	0.10	mg/l						
Sulfate as SO4	ND	0.24	0.50	mg/l						
LCS (W4B0616-BS1) Prepared: 02/08/24 Analyzed: 02/09/24										
Chloride, Total	20.8	0.19	0.50	mg/l	20.0		104 90-110			
Fluoride, Total	2.11	0.0090	0.10	mg/l	2.00		105 90-110			
Sulfate as SO4	21.2	0.24	0.50	mg/l	20.0		106 90-110			
Matrix Spike (W4B0616-MS1) Source: 4B05016-01 Prepared: 02/08/24 Analyzed: 02/09/24										
Chloride, Total	307	1.9	5.0	mg/l	200	85.6	111 76-118			
Fluoride, Total	21.0	0.090	1.0	mg/l	20.0	0.490	103 86-107			
Sulfate as SO4	360	2.4	5.0	mg/l	200	132	114 78-111			MS-01
Matrix Spike (W4B0616-MS2) Source: 4B05016-03 Prepared: 02/08/24 Analyzed: 02/09/24										
Chloride, Total	292	1.9	5.0	mg/l	200	79.4	106 76-118			
Fluoride, Total	20.6	0.090	1.0	mg/l	20.0	0.406	101 86-107			
Sulfate as SO4	355	2.4	5.0	mg/l	200	136	110 78-111			
Matrix Spike Dup (W4B0616-MSD1) Source: 4B05016-01 Prepared: 02/08/24 Analyzed: 02/09/24										
Chloride, Total	307	1.9	5.0	mg/l	200	85.6	111 76-118	0.03	20	
Fluoride, Total	21.1	0.090	1.0	mg/l	20.0	0.490	103 86-107	0.3	20	
Sulfate as SO4	360	2.4	5.0	mg/l	200	132	114 78-111	0.04	20	MS-01
Matrix Spike Dup (W4B0616-MSD2) Source: 4B05016-03 Prepared: 02/08/24 Analyzed: 02/09/24										
Chloride, Total	294	1.9	5.0	mg/l	200	79.4	107 76-118	0.7	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.406	102 86-107	1	20	
Sulfate as SO4	358	2.4	5.0	mg/l	200	136	111 78-111	0.6	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B0464 - EPA 140.1										
Blank (W4B0464-BLK1) Prepared & Analyzed: 02/06/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B0464-DUP1) Source: 4B06123-01 Prepared & Analyzed: 02/06/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Duplicate (W4B0464-DUP2) Source: 4B06123-02 Prepared & Analyzed: 02/06/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B0498 - SM 4500H+-B										
LCS (W4B0498-BS1) Prepared & Analyzed: 02/07/24										
pH	6.90	0.10	0.10	pH Units	6.86		101 98.8-101			
Duplicate (W4B0498-DUP1) Source: 4B06073-01 Prepared & Analyzed: 02/07/24										
pH	5.29	0.10	0.10	pH Units		5.42		2	3.1	
Batch: W4B0569 - SM 2120B										
LCS (W4B0569-BS1) Prepared & Analyzed: 02/07/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B0569-DUP1) Source: 4B06193-02 Prepared & Analyzed: 02/07/24										
Color	ND		3.0	Color Units		ND			10	
Duplicate (W4B0569-DUP2) Source: 4B06193-03 Prepared & Analyzed: 02/07/24										
Color	ND		3.0	Color Units		ND			10	
Batch: W4B0589 - EPA 353.2										
Blank (W4B0589-BLK1) Prepared & Analyzed: 02/07/24										
Nitrate as N	ND	0.040	0.20	mg/l						
Nitrite as N	ND	42	100	ug/l						
Blank (W4B0589-BLK2) Prepared & Analyzed: 02/07/24										
Nitrate as N	ND	0.040	0.20	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B0589-BS1) Prepared & Analyzed: 02/07/24										
Nitrate as N	1.00	0.040	0.20	mg/l	1.00		100 90-110			
Nitrite as N	1010	42	100	ug/l	1000		101 90-110			
LCS (W4B0589-BS2) Prepared & Analyzed: 02/07/24										
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101 90-110			
Nitrite as N	1000	42	100	ug/l	1000		100 90-110			
Matrix Spike (W4B0589-MS1) Source: 4A29002-01 Prepared & Analyzed: 02/07/24										
Nitrate as N	8.78	0.040	0.20	mg/l	2.00	6.78	100 90-110			
Nitrite as N	1020	42	100	ug/l	1000	ND	102 90-110			
Matrix Spike (W4B0589-MS2) Source: 4A29002-02 Prepared & Analyzed: 02/07/24										
Nitrate as N	2.96	0.040	0.20	mg/l	2.00	1.05	96 90-110			
Nitrite as N	1000	42	100	ug/l	1000	ND	100 90-110			
Matrix Spike Dup (W4B0589-MSD1) Source: 4A29002-01 Prepared & Analyzed: 02/07/24										

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0589 - EPA 353.2 (Continued)											
Matrix Spike Dup (W4B0589-MSD1)			Source: 4A29002-01			Prepared & Analyzed: 02/07/24					
Nitrate as N	8.78	0.040	0.20	mg/l	2.00	6.78	100	90-110	0	20	
Nitrite as N	1020	42	100	ug/l	1000	ND	102	90-110	0	20	
Matrix Spike Dup (W4B0589-MSD2)			Source: 4A29002-02			Prepared & Analyzed: 02/07/24					
Nitrate as N	3.09	0.040	0.20	mg/l	2.00	1.05	102	90-110	4	20	
Nitrite as N	997	42	100	ug/l	1000	ND	100	90-110	0.3	20	
Batch: W4B0603 - SM 2320B											
Blank (W4B0603-BLK1)			Prepared: 02/07/24 Analyzed: 02/08/24								
Alkalinity as CaCO3	ND	7.2	20	mg/l							
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l							
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l							
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l							
LCS (W4B0603-BS1)			Prepared: 02/07/24 Analyzed: 02/08/24								
Alkalinity as CaCO3	86.1	7.2	20	mg/l	87.8		98	94-108			
Bicarbonate Alkalinity as HCO3	105	8.8	24	mg/l	107		98	95-108			
Duplicate (W4B0603-DUP1)			Source: 3L08010-01			Prepared: 02/07/24 Analyzed: 02/08/24					
Alkalinity as CaCO3	104	7.2	20	mg/l		109			5	15	
Bicarbonate Alkalinity as HCO3	126	8.8	24	mg/l		133			5	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Batch: W4B0610 - SM 2540C											
Blank (W4B0610-BLK1)			Prepared: 02/07/24 Analyzed: 02/08/24								
Total Dissolved Solids	ND	4.0	10	mg/l							
LCS (W4B0610-BS1)			Prepared: 02/07/24 Analyzed: 02/08/24								
Total Dissolved Solids	803	4.0	10	mg/l	824		97	97-103			
Duplicate (W4B0610-DUP1)			Source: 4B07127-07			Prepared: 02/07/24 Analyzed: 02/08/24					
Total Dissolved Solids	1020	4.0	10	mg/l		981			4	10	
Duplicate (W4B0610-DUP2)			Source: 4B07136-02			Prepared: 02/07/24 Analyzed: 02/08/24					
Total Dissolved Solids	935	4.0	10	mg/l		937			0.2	10	
Batch: W4B1848 - EPA 350.1											
Blank (W4B1848-BLK1)			Prepared: 02/22/24 Analyzed: 02/29/24								
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W4B1848-BLK2)			Prepared: 02/22/24 Analyzed: 02/29/24								
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W4B1848-BS1)			Prepared: 02/22/24 Analyzed: 02/29/24								
Ammonia as N	0.256	0.017	0.10	mg/l	0.250		102	90-110			
LCS (W4B1848-BS2)			Prepared: 02/22/24 Analyzed: 02/29/24								
Ammonia as N	0.243	0.017	0.10	mg/l	0.250		97	90-110			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1848 - EPA 350.1 (Continued)											
Matrix Spike (W4B1848-MS1)	Source: 4B06037-03		Prepared: 02/22/24		Analyzed: 02/29/24						
Ammonia as N	0.370	0.017	0.10	mg/l	0.250	0.136	94	90-110			
Matrix Spike (W4B1848-MS2)	Source: 4B07015-01		Prepared: 02/22/24		Analyzed: 02/29/24						
Ammonia as N	0.238	0.017	0.10	mg/l	0.250	ND	95	90-110			
Matrix Spike Dup (W4B1848-MSD1)	Source: 4B06037-03		Prepared: 02/22/24		Analyzed: 02/29/24						
Ammonia as N	0.370	0.017	0.10	mg/l	0.250	0.136	94	90-110	0.06	15	
Matrix Spike Dup (W4B1848-MSD2)	Source: 4B07015-01		Prepared: 02/22/24		Analyzed: 02/29/24						
Ammonia as N	0.238	0.017	0.10	mg/l	0.250	ND	95	90-110	0.2	15	
Batch: W4B2385 - EPA 365.3											
Blank (W4B2385-BLK1)	Prepared: 02/28/24		Analyzed: 03/04/24								
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W4B2385-BS1)	Prepared: 02/28/24		Analyzed: 03/04/24								
Phosphorus as PO4, Total	0.596	0.021	0.030	mg/l	0.612		97	90-110			
Matrix Spike (W4B2385-MS1)	Source: 4B06187-07		Prepared: 02/28/24		Analyzed: 03/04/24						
Phosphorus as PO4, Total	0.711	0.021	0.030	mg/l	0.612	0.124	96	90-110			
Matrix Spike Dup (W4B2385-MSD1)	Source: 4B06187-07		Prepared: 02/28/24		Analyzed: 03/04/24						
Phosphorus as PO4, Total	0.730	0.021	0.030	mg/l	0.612	0.124	99	90-110	3	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1846 - EPA 200.7											
Blank (W4B1846-BLK1)					Prepared: 02/22/24 Analyzed: 02/23/24						
Boron, Total	ND	1.3	10	ug/l							
Calcium, Total	ND	0.0240	0.500	mg/l							
Magnesium, Total	ND	0.0148	0.500	mg/l							
Silica as SiO ₂ , Dissolved	0.0337	0.0086	0.10	mg/l							J
Silica as SiO ₂ , Total	0.0296	0.0086	0.10	mg/l							J
LCS (W4B1846-BS1)					Prepared: 02/22/24 Analyzed: 02/23/24						
Boron, Total	222	1.3	10	ug/l	200	115	111	85-115			
Calcium, Total	49.9	0.0240	0.500	mg/l	50.2	99	99	85-115			
Magnesium, Total	49.4	0.0148	0.500	mg/l	50.2	98	98	85-115			
Silica as SiO ₂ , Dissolved	45.3	0.0086	0.10	mg/l	43.2	105	105	85-115			
Silica as SiO ₂ , Total	45.3	0.0086	0.10	mg/l	43.2	105	105	85-115			
Matrix Spike (W4B1846-MS1)					Source: 4A31006-01 Prepared: 02/22/24 Analyzed: 02/23/24						
Boron, Total	340	1.3	10	ug/l	200	115	112	70-130			
Calcium, Total	143	0.0240	0.500	mg/l	50.2	96.3	93	70-130			
Magnesium, Total	74.2	0.0148	0.500	mg/l	50.2	25.4	97	70-130			
Silica as SiO ₂ , Dissolved	71.7	0.0086	0.10	mg/l	43.2	27.3	103	70-130			
Silica as SiO ₂ , Total	71.7	0.0086	0.10	mg/l	43.2	27.6	102	70-130			
Matrix Spike (W4B1846-MS2)					Source: 4B07136-02 Prepared: 02/22/24 Analyzed: 02/23/24						
Boron, Total	338	1.3	10	ug/l	200	114	112	70-130			
Calcium, Total	174	0.0240	0.500	mg/l	50.2	128	91	70-130			
Magnesium, Total	104	0.0148	0.500	mg/l	50.2	55.4	96	70-130			
Silica as SiO ₂ , Dissolved	85.0	0.0086	0.10	mg/l	43.2	40.5	103	70-130			
Silica as SiO ₂ , Total	85.0	0.0086	0.10	mg/l	43.2	40.7	103	70-130			
Matrix Spike Dup (W4B1846-MSD1)					Source: 4A31006-01 Prepared: 02/22/24 Analyzed: 02/23/24						
Boron, Total	340	1.3	10	ug/l	200	115	113	70-130	0.3	30	
Calcium, Total	143	0.0240	0.500	mg/l	50.2	96.3	94	70-130	0.3	30	
Magnesium, Total	74.5	0.0148	0.500	mg/l	50.2	25.4	98	70-130	0.5	30	
Silica as SiO ₂ , Dissolved	72.3	0.0086	0.10	mg/l	43.2	27.3	104	70-130	0.8	30	
Silica as SiO ₂ , Total	72.3	0.0086	0.10	mg/l	43.2	27.6	104	70-130	0.8	30	
Matrix Spike Dup (W4B1846-MSD2)					Source: 4B07136-02 Prepared: 02/22/24 Analyzed: 02/23/24						
Boron, Total	340	1.3	10	ug/l	200	114	113	70-130	0.4	30	
Calcium, Total	174	0.0240	0.500	mg/l	50.2	128	92	70-130	0.03	30	
Magnesium, Total	103	0.0148	0.500	mg/l	50.2	55.4	95	70-130	0.2	30	
Silica as SiO ₂ , Dissolved	85.4	0.0086	0.10	mg/l	43.2	40.5	104	70-130	0.5	30	
Silica as SiO ₂ , Total	85.4	0.0086	0.10	mg/l	43.2	40.7	104	70-130	0.5	30	
Batch: W4B1851 - EPA 200.8											
Blank (W4B1851-BLK1)					Prepared: 02/22/24 Analyzed: 02/26/24						
Aluminum, Total	ND	4.4	20	ug/l							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1851 - EPA 200.8 (Continued)											
Blank (W4B1851-BLK1)					Prepared: 02/22/24 Analyzed: 02/26/24						
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Calcium, Total	ND	0.051	0.50	mg/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Magnesium, Total	ND	0.050	0.50	mg/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W4B1851-BS1)											
Prepared: 02/22/24 Analyzed: 02/26/24											
Aluminum, Total	46.1	4.4	20	ug/l	50.0		92	85-115			
Arsenic, Total	51.1	0.074	0.40	ug/l	50.0		102	85-115			
Barium, Total	49.5	0.14	1.0	ug/l	50.0		99	85-115			
Calcium, Total	2.10	0.051	0.50	mg/l	2.05		102	85-115			
Copper, Total	52.4	0.23	0.50	ug/l	50.0		105	85-115			
Iron, Dissolved	1120	3.9	20	ug/l	1050		107	85-115			
Iron, Total	1120	3.9	20	ug/l	1050		107	85-115			
Lead, Total	50.0	0.083	0.20	ug/l	50.0		100	85-115			
Magnesium, Total	2.08	0.050	0.50	mg/l	2.05		101	85-115			
Manganese, Dissolved	50.0	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	50.0	0.23	1.0	ug/l	50.0		100	85-115			
Potassium, Total	2.04	0.068	0.50	mg/l	2.05		100	85-115			
Selenium, Total	50.2	0.067	0.40	ug/l	50.0		100	85-115			
Sodium, Total	2.18	0.10	1.0	mg/l	2.05		106	85-115			
Strontium, Total	47.9	0.036	0.20	ug/l	50.0		96	85-115			
Matrix Spike (W4B1851-MS1)											
Source: 4A31006-02					Prepared: 02/22/24 Analyzed: 02/26/24						
Aluminum, Total	47.3	4.4	20	ug/l	50.0	ND	95	70-130			
Arsenic, Total	51.3	0.074	0.40	ug/l	50.0	0.490	101	70-130			
Barium, Total	155	0.14	1.0	ug/l	50.0	106	98	70-130			
Calcium, Total	75.5	0.051	0.50	mg/l	2.05	76.4	NR	70-130			MS-02
Copper, Total	48.1	0.23	0.50	ug/l	50.0	ND	96	70-130			
Iron, Total	1120	3.9	20	ug/l	1050	ND	106	70-130			
Lead, Total	49.3	0.083	0.20	ug/l	50.0	ND	99	70-130			
Magnesium, Total	20.5	0.050	0.50	mg/l	2.05	19.3	55	70-130			MS-02

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1851 - EPA 200.8 (Continued)											
Matrix Spike (W4B1851-MS1)			Source: 4A31006-02			Prepared: 02/22/24			Analyzed: 02/26/24		
Manganese, Total	48.1	0.23	1.0	ug/l	50.0	0.925	94	70-130			
Potassium, Total	5.66	0.068	0.50	mg/l	2.05	3.86	88	70-130			
Selenium, Total	49.5	0.067	0.40	ug/l	50.0	0.842	97	70-130			
Sodium, Total	30.0	0.10	1.0	mg/l	2.05	29.7	16	70-130			MS-02
Strontium, Total	626	0.036	0.20	ug/l	50.0	565	123	70-130			
Matrix Spike (W4B1851-MS2)			Source: 4B06193-03			Prepared: 02/22/24			Analyzed: 02/26/24		
Aluminum, Total	48.4	4.4	20	ug/l	50.0	5.21	86	70-130			
Arsenic, Total	51.5	0.074	0.40	ug/l	50.0	1.28	100	70-130			
Barium, Total	113	0.14	1.0	ug/l	50.0	65.4	96	70-130			
Calcium, Total	121	0.051	0.50	mg/l	2.05	124	NR	70-130			MS-02
Copper, Total	50.0	0.23	0.50	ug/l	50.0	2.29	95	70-130			
Iron, Total	1080	3.9	20	ug/l	1050	ND	103	70-130			
Lead, Total	49.4	0.083	0.20	ug/l	50.0	0.116	99	70-130			
Magnesium, Total	52.1	0.050	0.50	mg/l	2.05	52.1	100	70-130			MS-02
Manganese, Total	50.6	0.23	1.0	ug/l	50.0	3.49	94	70-130			
Potassium, Total	4.58	0.068	0.50	mg/l	2.05	2.78	88	70-130			
Selenium, Total	51.4	0.067	0.40	ug/l	50.0	3.28	96	70-130			
Sodium, Total	88.8	0.10	1.0	mg/l	2.05	91.3	NR	70-130			MS-02
Strontium, Total	732	0.036	0.20	ug/l	50.0	707	50	70-130			MS-02
Matrix Spike Dup (W4B1851-MSD1)			Source: 4A31006-02			Prepared: 02/22/24			Analyzed: 02/26/24		
Aluminum, Total	47.2	4.4	20	ug/l	50.0	ND	94	70-130	0.1	30	
Arsenic, Total	50.1	0.074	0.40	ug/l	50.0	0.490	99	70-130	2	30	
Barium, Total	155	0.14	1.0	ug/l	50.0	106	99	70-130	0.07	30	
Calcium, Total	77.8	0.051	0.50	mg/l	2.05	76.4	68	70-130	3	30	MS-02
Copper, Total	49.1	0.23	0.50	ug/l	50.0	ND	98	70-130	2	30	
Iron, Total	1090	3.9	20	ug/l	1050	ND	104	70-130	2	30	
Lead, Total	49.0	0.083	0.20	ug/l	50.0	ND	98	70-130	0.8	30	
Magnesium, Total	21.2	0.050	0.50	mg/l	2.05	19.3	90	70-130	3	30	
Manganese, Total	49.2	0.23	1.0	ug/l	50.0	0.925	97	70-130	2	30	
Potassium, Total	5.80	0.068	0.50	mg/l	2.05	3.86	94	70-130	2	30	
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	0.842	98	70-130	0.6	30	
Sodium, Total	30.9	0.10	1.0	mg/l	2.05	29.7	61	70-130	3	30	MS-02
Strontium, Total	628	0.036	0.20	ug/l	50.0	565	127	70-130	0.3	30	
Matrix Spike Dup (W4B1851-MSD2)			Source: 4B06193-03			Prepared: 02/22/24			Analyzed: 02/26/24		
Aluminum, Total	49.6	4.4	20	ug/l	50.0	5.21	89	70-130	2	30	
Arsenic, Total	52.4	0.074	0.40	ug/l	50.0	1.28	102	70-130	2	30	
Barium, Total	113	0.14	1.0	ug/l	50.0	65.4	95	70-130	0.5	30	
Calcium, Total	125	0.051	0.50	mg/l	2.05	124	49	70-130	3	30	MS-02
Copper, Total	51.0	0.23	0.50	ug/l	50.0	2.29	97	70-130	2	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1851 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B1851-MSD2)		Source: 4B06193-03			Prepared: 02/22/24		Analyzed: 02/26/24				
Iron, Total	1120	3.9	20	ug/l	1050	ND	107	70-130	4	30	
Lead, Total	49.7	0.083	0.20	ug/l	50.0	0.116	99	70-130	0.6	30	
Magnesium, Total	53.0	0.050	0.50	mg/l	2.05	52.1	46	70-130	2	30	MS-02
Manganese, Total	51.9	0.23	1.0	ug/l	50.0	3.49	97	70-130	3	30	
Potassium, Total	4.68	0.068	0.50	mg/l	2.05	2.78	93	70-130	2	30	
Selenium, Total	51.9	0.067	0.40	ug/l	50.0	3.28	97	70-130	0.9	30	
Sodium, Total	91.6	0.10	1.0	mg/l	2.05	91.3	17	70-130	3	30	MS-02
Strontium, Total	723	0.036	0.20	ug/l	50.0	707	33	70-130	1	30	MS-02

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0516 - SM 9221B											
Blank (W4B0516-BLK1)		Prepared: 02/06/24 Analyzed: 02/08/24									
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:23

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Using source temperature @20C
HT1.0	Holding time exceeded. Sample was received at the lab past holding time.
HT1.3	Holding time exceeded. Sample was analyzed past the holding time.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
MS1.2	Matrix spike recovery exceeds lower control limit. Reported results for parent matrix should be considered estimated due to matrix interferences.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B07136

Report Date: 4/08/2024

Received Date: 2/7/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

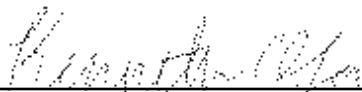
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/07/24 with the Chain-of-Custody document. The samples were received in good condition, at 3.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-RO#3-515	Client	4B07136-01	Water	02/07/24 12:55	
PT-RO#3-514	Client	4B07136-02	Water	02/07/24 12:55	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-RO#3-515

Sampled: 02/07/24 12:55 by Client

4B07136-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B0616	Preparation: _NONE (LC)		Prepared: 02/08/24 08:25		Analyst: CAM		
Chloride, Total	1.6	0.19	0.50	mg/l	1	02/09/24	
Fluoride, Total	0.023	0.0090	0.10	mg/l	1	02/09/24	J
Sulfate as SO4	0.70	0.24	0.50	mg/l	1	02/09/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4B2177	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:54		Analyst: aln		
Aggressive Index	6.97			AGI	1	02/27/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B0609	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 18:14		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/07/24 19:36	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4B1849	Preparation: _NONE (WETCHEM)		Prepared: 02/22/24 11:26		Analyst: YMT		
Ammonia as N	0.068	0.017	0.10	mg/l	1	02/29/24	J
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B0724	Preparation: _NONE (WETCHEM)		Prepared: 02/08/24 16:47		Analyst: ism		
Nitrate as N	0.094	0.040	0.20	mg/l	1	02/08/24 19:00	J
Nitrite as N	ND	42	100	ug/l	1	02/08/24 19:00	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B0716	Preparation: _NONE (WETCHEM)		Prepared: 02/08/24 16:20		Analyst: hhl		
Color	ND		3.0	Color Units	1	02/08/24 17:12	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B0603	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 17:13		Analyst: mes		
Alkalinity as CaCO3	11	7.2	20	mg/l	1	02/08/24	J
Bicarbonate Alkalinity as HCO3	13	8.8	24	mg/l	1	02/08/24	J
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2172	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:30		Analyst: aln		
Langelier Index @ 20 C	-4.70	-20.0	-10.0	LSI	1	02/27/24	
Langelier Index @ 60 C	-4.17	-20.0	-10.0	LSI	1	02/27/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2178	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:56		Analyst: aln		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3-515

Sampled: 02/07/24 12:55 by Client

4B07136-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B				Instr: [CALC]			
Batch ID: W4B2178	Preparation: _NONE (METALS)			Prepared: 02/27/24 10:56		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	-33.7	-200	-200	N/A	1	02/27/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B0610	Preparation: _NONE (WETCHEM)			Prepared: 02/07/24 18:26		Analyst: bel	
Total Dissolved Solids	17	4.0	10	mg/l	1	02/08/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B0600	Preparation: _NONE (WETCHEM)			Prepared: 02/07/24 16:53		Analyst: mes	
pH	6.19	0.10	0.10	pH Units	1	02/07/24 18:23	*

Metals by EPA 200 Series Methods

Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 02/22/24 10:56		Analyst: kvm	
Hardness as CaCO3, Total	ND	0.121	3.31	mg/l		02/23/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B1846	Preparation: EPA 200.2			Prepared: 02/22/24 10:56		Analyst: kvm	
Boron, Total	66	1.3	10	ug/l	1	02/23/24	
Calcium, Total	0.220	0.0240	0.500	mg/l	1	02/23/24	J
Magnesium, Total	0.0910	0.0148	0.500	mg/l	1	02/23/24	J
Silica as SiO2, Dissolved	0.57	0.0086	0.10	mg/l	1	02/23/24	
Silica as SiO2, Total	0.58	0.0086	0.10	mg/l	1	02/23/24	

Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1851	Preparation: EPA 200.2			Prepared: 02/22/24 13:25		Analyst: tyc	
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	ND	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	0.15	0.14	1.0	ug/l	1	02/26/24	J
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	0.21	0.068	0.50	mg/l	1	02/26/24	J
Selenium, Total	ND	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	6.8	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	1.1	0.036	0.20	ug/l	1	02/26/24	

Microbiological Parameters by Standard Methods

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3-515

Sampled: 02/07/24 12:55 by Client

4B07136-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods (Continued)							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B0664		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/07/24 19:26		Analyst: slh	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/09/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B0665		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/07/24 19:24		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3-514

Sampled: 02/07/24 12:55 by Client

4B07136-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B0875	Preparation: _NONE (LC)		Prepared: 02/12/24 09:15		Analyst: CAM		
Chloride, Total	110	0.19	0.50	mg/l	1	02/12/24	
Fluoride, Total	0.27	0.0090	0.10	mg/l	1	02/12/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4B2177	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:54		Analyst: aln		
Aggressive Index	11.7			AGI	1	02/27/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B0609	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 18:14		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/07/24 19:36	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4B1849	Preparation: _NONE (WETCHEM)		Prepared: 02/22/24 11:26		Analyst: YMT		
Ammonia as N	0.25	0.017	0.10	mg/l	1	02/29/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B0724	Preparation: _NONE (WETCHEM)		Prepared: 02/08/24 16:47		Analyst: ism		
Nitrate as N	1.1	0.040	0.20	mg/l	1	02/08/24 19:01	
Nitrite as N	ND	42	100	ug/l	1	02/08/24 19:01	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO4, Total	0.20	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B0717	Preparation: _NONE (WETCHEM)		Prepared: 02/08/24 16:21		Analyst: hhl		
Color	ND		3.0	Color Units	1	02/08/24 17:47	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B0603	Preparation: _NONE (WETCHEM)		Prepared: 02/07/24 17:13		Analyst: mes		
Alkalinity as CaCO3	250	7.2	20	mg/l	1	02/08/24	
Bicarbonate Alkalinity as HCO3	310	8.8	24	mg/l	1	02/08/24	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/08/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2172	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:30		Analyst: aln		
Langelier Index @ 20 C	-0.247	-20.0	-10.0	LSI	1	02/27/24	
Langelier Index @ 60 C	0.264	-20.0	-10.0	LSI	1	02/27/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4B2178	Preparation: _NONE (METALS)		Prepared: 02/27/24 10:56		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	-22.0	-200	-200	N/A	1	02/27/24	A-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3-514

Sampled: 02/07/24 12:55 by Client

4B07136-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B							
Batch ID: W4B2178	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2540C							
Batch ID: W4B0610	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	940	4.0	10	mg/l	1	02/08/24	
Method: SM 4500H+-B							
Batch ID: W4B0600	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	6.79	0.10	0.10	pH Units	1	02/07/24 18:26	*

Metals by EPA 200 Series Methods

Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	549	0.121	3.31	mg/l		02/23/24	
Method: EPA 200.7							
Batch ID: W4B1846	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	110	1.3	10	ug/l	1	02/23/24	
Calcium, Total	128	0.0240	0.500	mg/l	1	02/23/24	
Magnesium, Total	55.4	0.0148	0.500	mg/l	1	02/23/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/23/24	
Silica as SiO2, Total	41	0.0086	0.10	mg/l	1	02/23/24	
Method: EPA 200.8							
Batch ID: W4B1851	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	5.9	4.4	20	ug/l	1	02/26/24	J
Arsenic, Total	1.1	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	62	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	3.5	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	0.16	0.083	0.20	ug/l	1	02/26/24	J
Manganese, Dissolved	1.2	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	1.1	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	2.7	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	2.7	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	91	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	700	0.036	0.20	ug/l	1	02/26/24	

Microbiological Parameters by Standard Methods

Method: SM 9215E							
Batch ID: W4B0664	Preparation: _NONE (MICROBIOLOGY)						Analyst: slh

4B07136

Page 7 of 21

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: PT-RO#3-514

Sampled: 02/07/24 12:55 by Client

4B07136-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods (Continued)							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B0664	Preparation: _NONE (MICROBIOLOGY)			Prepared: 02/07/24 19:26		Analyst: slh	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/09/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B0665	Preparation: _NONE (MICROBIOLOGY)			Prepared: 02/07/24 19:24		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/09/24	

Sample Results

(Continued)

Sample: PT-RO#3-514

Sampled: 02/07/24 12:55 by Client

4B07136-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B0875	Preparation: _NONE (LC)			Prepared: 02/12/24 09:15		Analyst: CAM	
Sulfate as SO4	360	0.96	2.0	mg/l	4	02/12/24	M-05

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Sample Results BSK Associates Laboratory Fresno

Sample: PT-RO#3-515
4B07136-01 (Water)

Sampled: 02/07/24 12:55 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/05/24	HT1.0
Chlorate	7.9		5.0	ug/L	1	03/05/24	
<i>Surrogate(s)</i>							
Dichloroacetate	106%		90-115			03/05/24	HT1.0
Dichloroacetate	106%		90-115			03/05/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/07/24	HT1.3

General Chemistry

Method: EPA 300.0							
Bromide	0.20		0.010	mg/L	1	03/02/24	

Sample: PT-RO#3-514
4B07136-02 (Water)

Sampled: 02/07/24 12:55 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/05/24	HT1.0
Chlorate	240		5.0	ug/L	1	03/05/24	
<i>Surrogate(s)</i>							
Dichloroacetate	93%		90-115			03/05/24	HT1.0
Dichloroacetate	93%		90-115			03/05/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/07/24	HT1.3

General Chemistry

Method: EPA 300.0							
Bromide	0.64		0.010	mg/L	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: AHC0135 - EPA 317.0									
Blank (AHC0135-BLK1)									
Bromate	ND	1.0	ug/L	Prepared & Analyzed: 03/07/24					
LCS (AHC0135-BS1)									
Bromate	9.8	1.0	ug/L	10.0	98	85-115			
LCS Dup (AHC0135-BSD1)									
Bromate	9.9	1.0	ug/L	10.0	99	85-115	1	10	
Matrix Spike (AHC0135-MS1)									
Bromate	9.5	1.0	ug/L	10.0	ND	95	75-125		
Matrix Spike Dup (AHC0135-MSD1)									
Bromate	9.7	1.0	ug/L	10.0	ND	97	75-125	2	10
Batch: AHC0219 - EPA 300.1									
Blank (AHC0219-BLK1)									
Chlorate	ND	5.0	ug/L	Prepared & Analyzed: 03/05/24					
Chlorite	ND	0.0050	mg/L						
<i>Surrogate(s)</i>									
Dichloroacetate	0.508		mg/L	0.500	102	90-115			
Dichloroacetate	508		ug/L	500	102	90-115			
LCS (AHC0219-BS1)									
Chlorate	200	5.0	ug/L	200	100	85-115			
Chlorite	0.21	0.0050	mg/L	0.200	105	85-115			
<i>Surrogate(s)</i>									
Dichloroacetate	0.512		mg/L	0.500	102	90-115			
Dichloroacetate	512		ug/L	500	102	90-115			
LCS Dup (AHC0219-BSD1)									
Chlorate	200	5.0	ug/L	200	100	85-115	0.1	10	
Chlorite	0.21	0.0050	mg/L	0.200	103	85-115	2	10	
<i>Surrogate(s)</i>									
Dichloroacetate	0.525		mg/L	0.500	105	90-115			
Dichloroacetate	525		ug/L	500	105	90-115			
Matrix Spike (AHC0219-MS1)									
Chlorate	100	5.0	ug/L	100	ND	104	75-125		
Chlorite	0.10	0.0050	mg/L	0.100	ND	104	75-125		
<i>Surrogate(s)</i>									
Dichloroacetate	0.549		mg/L	0.500	110	90-115			
Dichloroacetate	549		ug/L	500	110	90-115			
Matrix Spike (AHC0219-MS2)									
Chlorate	100	5.0	ug/L	100	ND	105	75-125		
Chlorite	0.097	0.0050	mg/L	0.100	ND	97	75-125		
<i>Surrogate(s)</i>									
Dichloroacetate	0.521		mg/L	0.500	104	90-115			
Dichloroacetate	521		ug/L	500	104	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0219 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0219-MSD1)			Source: AHB3420-01		Prepared & Analyzed: 03/05/24					
Chlorate	99	5.0	ug/L	100	ND	99	75-125	5	10	
Chlorite	0.10	0.0050	mg/L	0.100	ND	105	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.555		mg/L	0.500		111	90-115			
Dichloroacetate	555		ug/L	500		111	90-115			
Matrix Spike Dup (AHC0219-MSD2)			Source: AHC0050-01		Prepared & Analyzed: 03/06/24					
Chlorate	100	5.0	ug/L	100	ND	104	75-125	0.9	10	
Chlorite	0.096	0.0050	mg/L	0.100	ND	96	75-125	1	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.509		mg/L	0.500		102	90-115			
Dichloroacetate	509		ug/L	500		102	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0061 - EPA 300.0										
Blank (AHC0061-BLK1)			Prepared & Analyzed: 03/01/24							
Bromide	ND	0.010	mg/L							
LCS (AHC0061-BS1)			Prepared: 03/01/24 Analyzed: 03/02/24							
Bromide	0.19	0.010	mg/L	0.200		93	90-110			
Matrix Spike (AHC0061-MS1)			Source: AHC0047-02		Prepared: 03/01/24 Analyzed: 03/02/24					
Bromide	0.28	0.010	mg/L	0.100	0.20	74	80-120			MS1.0
Matrix Spike Dup (AHC0061-MSD1)			Source: AHC0047-02		Prepared: 03/01/24 Analyzed: 03/02/24					
Bromide	0.28	0.010	mg/L	0.100	0.20	76	80-120	0.7	10	MS1.0

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0616 - EPA 300.0											
Blank (W4B0616-BLK1)					Prepared: 02/08/24 Analyzed: 02/09/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B0616-BS1)					Prepared: 02/08/24 Analyzed: 02/09/24						
Chloride, Total	20.8	0.19	0.50	mg/l	20.0		104	90-110			
Fluoride, Total	2.11	0.0090	0.10	mg/l	2.00		105	90-110			
Sulfate as SO4	21.2	0.24	0.50	mg/l	20.0		106	90-110			
Matrix Spike (W4B0616-MS1)					Source: 4B05016-01 Prepared: 02/08/24 Analyzed: 02/09/24						
Chloride, Total	307	1.9	5.0	mg/l	200	85.6	111	76-118			
Fluoride, Total	21.0	0.090	1.0	mg/l	20.0	0.490	103	86-107			
Sulfate as SO4	360	2.4	5.0	mg/l	200	132	114	78-111			MS-01
Matrix Spike (W4B0616-MS2)					Source: 4B05016-03 Prepared: 02/08/24 Analyzed: 02/09/24						
Chloride, Total	292	1.9	5.0	mg/l	200	79.4	106	76-118			
Fluoride, Total	20.6	0.090	1.0	mg/l	20.0	0.406	101	86-107			
Sulfate as SO4	355	2.4	5.0	mg/l	200	136	110	78-111			
Matrix Spike Dup (W4B0616-MSD1)					Source: 4B05016-01 Prepared: 02/08/24 Analyzed: 02/09/24						
Chloride, Total	307	1.9	5.0	mg/l	200	85.6	111	76-118	0.03	20	
Fluoride, Total	21.1	0.090	1.0	mg/l	20.0	0.490	103	86-107	0.3	20	
Sulfate as SO4	360	2.4	5.0	mg/l	200	132	114	78-111	0.04	20	MS-01
Matrix Spike Dup (W4B0616-MSD2)					Source: 4B05016-03 Prepared: 02/08/24 Analyzed: 02/09/24						
Chloride, Total	294	1.9	5.0	mg/l	200	79.4	107	76-118	0.7	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.406	102	86-107	1	20	
Sulfate as SO4	358	2.4	5.0	mg/l	200	136	111	78-111	0.6	20	
Batch: W4B0875 - EPA 300.0											
Blank (W4B0875-BLK1)					Prepared & Analyzed: 02/12/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B0875-BS1)					Prepared & Analyzed: 02/12/24						
Chloride, Total	20.4	0.19	0.50	mg/l	20.0		102	90-110			
Fluoride, Total	1.98	0.0090	0.10	mg/l	2.00		99	90-110			
Sulfate as SO4	20.2	0.24	0.50	mg/l	20.0		101	90-110			
Matrix Spike (W4B0875-MS1)					Source: 4B08077-04 Prepared & Analyzed: 02/12/24						
Chloride, Total	244	1.9	5.0	mg/l	200	32.8	106	76-118			
Fluoride, Total	20.7	0.090	1.0	mg/l	20.0	0.744	100	90-107			
Sulfate as SO4	271	2.4	5.0	mg/l	200	61.8	105	84-111			
Matrix Spike (W4B0875-MS2)					Source: 4B08097-04 Prepared & Analyzed: 02/12/24						
Chloride, Total	219	1.9	5.0	mg/l	200	6.35	106	76-118			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by IC, EPA Method 300.0 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0875 - EPA 300.0 (Continued)											
Matrix Spike (W4B0875-MS2)			Source: 4B08097-04			Prepared & Analyzed: 02/12/24					
Fluoride, Total	20.0	0.090	1.0	mg/l	20.0	ND	100	90-107			
Sulfate as SO4	220	2.4	5.0	mg/l	200	10.1	105	84-111			
Matrix Spike Dup (W4B0875-MSD1)			Source: 4B08077-04			Prepared & Analyzed: 02/12/24					
Chloride, Total	245	1.9	5.0	mg/l	200	32.8	106	76-118	0.4	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.744	100	90-107	0.2	10	
Sulfate as SO4	272	2.4	5.0	mg/l	200	61.8	105	84-111	0.6	20	
Matrix Spike Dup (W4B0875-MSD2)			Source: 4B08097-04			Prepared & Analyzed: 02/12/24					
Chloride, Total	219	1.9	5.0	mg/l	200	6.35	106	76-118	0.09	20	
Fluoride, Total	20.1	0.090	1.0	mg/l	20.0	ND	101	90-107	0.5	10	
Sulfate as SO4	219	2.4	5.0	mg/l	200	10.1	105	84-111	0.2	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B0600 - SM 4500H+-B										
LCS (W4B0600-BS1)										
pH	6.94	0.10	0.10	pH Units	6.86		101 98.8-101			
Prepared & Analyzed: 02/07/24										
Duplicate (W4B0600-DUP1)										
pH	6.74	0.10	0.10	pH Units		6.56		3	3.1	
Source: 3L08010-01										
Prepared & Analyzed: 02/07/24										
Batch: W4B0603 - SM 2320B										
Blank (W4B0603-BLK1)										
Alkalinity as CaCO3	ND	7.2	20	mg/l						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l						
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l						
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l						
Prepared: 02/07/24 Analyzed: 02/08/24										
LCS (W4B0603-BS1)										
Alkalinity as CaCO3	86.1	7.2	20	mg/l	87.8		98 94-108			
Bicarbonate Alkalinity as HCO3	105	8.8	24	mg/l	107		98 95-108			
Prepared: 02/07/24 Analyzed: 02/08/24										
Duplicate (W4B0603-DUP1)										
Alkalinity as CaCO3	104	7.2	20	mg/l		109		5	15	
Bicarbonate Alkalinity as HCO3	126	8.8	24	mg/l		133		5	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND			200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND			200	
Source: 3L08010-01										
Prepared: 02/07/24 Analyzed: 02/08/24										
Batch: W4B0609 - EPA 140.1										
Blank (W4B0609-BLK1)										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Prepared & Analyzed: 02/07/24										
Duplicate (W4B0609-DUP1)										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Source: 4B07046-03										
Prepared & Analyzed: 02/07/24										
Batch: W4B0610 - SM 2540C										
Blank (W4B0610-BLK1)										
Total Dissolved Solids	ND	4.0	10	mg/l						
Prepared: 02/07/24 Analyzed: 02/08/24										
LCS (W4B0610-BS1)										
Total Dissolved Solids	803	4.0	10	mg/l	824		97 97-103			
Prepared: 02/07/24 Analyzed: 02/08/24										
Duplicate (W4B0610-DUP1)										
Total Dissolved Solids	1020	4.0	10	mg/l		981		4	10	
Source: 4B07127-07										
Prepared: 02/07/24 Analyzed: 02/08/24										
Duplicate (W4B0610-DUP2)										
Total Dissolved Solids	935	4.0	10	mg/l		937		0.2	10	
Source: 4B07136-02										
Prepared: 02/07/24 Analyzed: 02/08/24										
Batch: W4B0716 - SM 2120B										
LCS (W4B0716-BS1)										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Prepared & Analyzed: 02/08/24										
Duplicate (W4B0716-DUP1)										
Color	ND		3.0	Color Units		ND			10	
Source: 4B07104-02										
Prepared & Analyzed: 02/08/24										
Duplicate (W4B0716-DUP2)										
Source: 4B07136-01										
Prepared & Analyzed: 02/08/24										

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B0716 - SM 2120B (Continued)										
Duplicate (W4B0716-DUP2)			Source: 4B07136-01			Prepared & Analyzed: 02/08/24				
Color	ND		3.0	Color Units		ND			10	
Batch: W4B0717 - SM 2120B										
LCS (W4B0717-BS1)						Prepared & Analyzed: 02/08/24				
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B0717-DUP1)			Source: 4B07139-14			Prepared & Analyzed: 02/08/24				
Color	ND		3.0	Color Units		ND			10	
Duplicate (W4B0717-DUP2)			Source: 4B08077-04			Prepared & Analyzed: 02/08/24				
Color	ND		3.0	Color Units		ND			10	
Batch: W4B0724 - EPA 353.2										
Blank (W4B0724-BLK1)						Prepared & Analyzed: 02/08/24				
Nitrate as N	ND	0.040	0.20	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B0724-BS1)						Prepared & Analyzed: 02/08/24				
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101 90-110			
Nitrite as N	1010	42	100	ug/l	1000		101 90-110			
Matrix Spike (W4B0724-MS1)			Source: 4B07123-01			Prepared & Analyzed: 02/08/24				
Nitrate as N	3.97	0.040	0.20	mg/l	2.00	1.98	100 90-110			
Nitrite as N	1030	42	100	ug/l	1000	ND	103 90-110			
Matrix Spike Dup (W4B0724-MSD1)			Source: 4B07123-01			Prepared & Analyzed: 02/08/24				
Nitrate as N	3.98	0.040	0.20	mg/l	2.00	1.98	100 90-110	0.3	20	
Nitrite as N	1020	42	100	ug/l	1000	ND	102 90-110	1	20	
Batch: W4B1849 - EPA 350.1										
Blank (W4B1849-BLK1)						Prepared: 02/22/24 Analyzed: 02/29/24				
Ammonia as N	ND	0.017	0.10	mg/l						
Blank (W4B1849-BLK2)						Prepared: 02/22/24 Analyzed: 02/29/24				
Ammonia as N	ND	0.017	0.10	mg/l						
LCS (W4B1849-BS1)						Prepared: 02/22/24 Analyzed: 02/29/24				
Ammonia as N	0.235	0.017	0.10	mg/l	0.250		94 90-110			
LCS (W4B1849-BS2)						Prepared: 02/22/24 Analyzed: 02/29/24				
Ammonia as N	0.238	0.017	0.10	mg/l	0.250		95 90-110			
Matrix Spike (W4B1849-MS1)			Source: 4A25001-01			Prepared: 02/22/24 Analyzed: 02/29/24				
Ammonia as N	0.234	0.017	0.10	mg/l	0.250	ND	93 90-110			
Matrix Spike (W4B1849-MS2)			Source: 4B09124-02			Prepared: 02/22/24 Analyzed: 02/29/24				
Ammonia as N	0.315	0.017	0.10	mg/l	0.250	0.0858	92 90-110			
Matrix Spike Dup (W4B1849-MSD1)			Source: 4A25001-01			Prepared: 02/22/24 Analyzed: 02/29/24				
Ammonia as N	0.233	0.017	0.10	mg/l	0.250	ND	93 90-110	0.1	15	
Matrix Spike Dup (W4B1849-MSD2)			Source: 4B09124-02			Prepared: 02/22/24 Analyzed: 02/29/24				

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1849 - EPA 350.1 (Continued)											
Matrix Spike Dup (W4B1849-MSD2) Source: 4B09124-02 Prepared: 02/22/24 Analyzed: 02/29/24											
Ammonia as N	0.311	0.017	0.10	mg/l	0.250	0.0858	90	90-110	1	15	
Batch: W4B2385 - EPA 365.3											
Blank (W4B2385-BLK1) Prepared: 02/28/24 Analyzed: 03/04/24											
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W4B2385-BS1) Prepared: 02/28/24 Analyzed: 03/04/24											
Phosphorus as PO4, Total	0.596	0.021	0.030	mg/l	0.612		97	90-110			
Matrix Spike (W4B2385-MS1) Source: 4B06187-07 Prepared: 02/28/24 Analyzed: 03/04/24											
Phosphorus as PO4, Total	0.711	0.021	0.030	mg/l	0.612	0.124	96	90-110			
Matrix Spike Dup (W4B2385-MSD1) Source: 4B06187-07 Prepared: 02/28/24 Analyzed: 03/04/24											
Phosphorus as PO4, Total	0.730	0.021	0.030	mg/l	0.612	0.124	99	90-110	3	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1846 - EPA 200.7									
Blank (W4B1846-BLK1)					Prepared: 02/22/24 Analyzed: 02/23/24				
Boron, Total	ND	1.3	10	ug/l					
Calcium, Total	ND	0.0240	0.500	mg/l					
Magnesium, Total	ND	0.0148	0.500	mg/l					
Silica as SiO ₂ , Dissolved	0.0337	0.0086	0.10	mg/l					J
Silica as SiO ₂ , Total	0.0296	0.0086	0.10	mg/l					J
LCS (W4B1846-BS1)					Prepared: 02/22/24 Analyzed: 02/23/24				
Boron, Total	222	1.3	10	ug/l	200	115	111 85-115		
Calcium, Total	49.9	0.0240	0.500	mg/l	50.2	99	85-115		
Magnesium, Total	49.4	0.0148	0.500	mg/l	50.2	98	85-115		
Silica as SiO ₂ , Dissolved	45.3	0.0086	0.10	mg/l	43.2	105	85-115		
Silica as SiO ₂ , Total	45.3	0.0086	0.10	mg/l	43.2	105	85-115		
Matrix Spike (W4B1846-MS1)					Source: 4A31006-01 Prepared: 02/22/24 Analyzed: 02/23/24				
Boron, Total	340	1.3	10	ug/l	200	115	112 70-130		
Calcium, Total	143	0.0240	0.500	mg/l	50.2	96.3	93 70-130		
Magnesium, Total	74.2	0.0148	0.500	mg/l	50.2	25.4	97 70-130		
Silica as SiO ₂ , Dissolved	71.7	0.0086	0.10	mg/l	43.2	27.3	103 70-130		
Silica as SiO ₂ , Total	71.7	0.0086	0.10	mg/l	43.2	27.6	102 70-130		
Matrix Spike (W4B1846-MS2)					Source: 4B07136-02 Prepared: 02/22/24 Analyzed: 02/23/24				
Boron, Total	338	1.3	10	ug/l	200	114	112 70-130		
Calcium, Total	174	0.0240	0.500	mg/l	50.2	128	91 70-130		
Magnesium, Total	104	0.0148	0.500	mg/l	50.2	55.4	96 70-130		
Silica as SiO ₂ , Dissolved	85.0	0.0086	0.10	mg/l	43.2	40.5	103 70-130		
Silica as SiO ₂ , Total	85.0	0.0086	0.10	mg/l	43.2	40.7	103 70-130		
Matrix Spike Dup (W4B1846-MSD1)					Source: 4A31006-01 Prepared: 02/22/24 Analyzed: 02/23/24				
Boron, Total	340	1.3	10	ug/l	200	115	113 70-130	0.3	30
Calcium, Total	143	0.0240	0.500	mg/l	50.2	96.3	94 70-130	0.3	30
Magnesium, Total	74.5	0.0148	0.500	mg/l	50.2	25.4	98 70-130	0.5	30
Silica as SiO ₂ , Dissolved	72.3	0.0086	0.10	mg/l	43.2	27.3	104 70-130	0.8	30
Silica as SiO ₂ , Total	72.3	0.0086	0.10	mg/l	43.2	27.6	104 70-130	0.8	30
Matrix Spike Dup (W4B1846-MSD2)					Source: 4B07136-02 Prepared: 02/22/24 Analyzed: 02/23/24				
Boron, Total	340	1.3	10	ug/l	200	114	113 70-130	0.4	30
Calcium, Total	174	0.0240	0.500	mg/l	50.2	128	92 70-130	0.03	30
Magnesium, Total	103	0.0148	0.500	mg/l	50.2	55.4	95 70-130	0.2	30
Silica as SiO ₂ , Dissolved	85.4	0.0086	0.10	mg/l	43.2	40.5	104 70-130	0.5	30
Silica as SiO ₂ , Total	85.4	0.0086	0.10	mg/l	43.2	40.7	104 70-130	0.5	30
Batch: W4B1851 - EPA 200.8									
Blank (W4B1851-BLK1)					Prepared: 02/22/24 Analyzed: 02/26/24				
Aluminum, Total	ND	4.4	20	ug/l					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1851 - EPA 200.8 (Continued)											
Blank (W4B1851-BLK1)					Prepared: 02/22/24 Analyzed: 02/26/24						
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W4B1851-BS1)											
					Prepared: 02/22/24 Analyzed: 02/26/24						
Aluminum, Total	46.1	4.4	20	ug/l	50.0		92	85-115			
Arsenic, Total	51.1	0.074	0.40	ug/l	50.0		102	85-115			
Barium, Total	49.5	0.14	1.0	ug/l	50.0		99	85-115			
Copper, Total	52.4	0.23	0.50	ug/l	50.0		105	85-115			
Iron, Dissolved	1120	3.9	20	ug/l	1050		107	85-115			
Iron, Total	1120	3.9	20	ug/l	1050		107	85-115			
Lead, Total	50.0	0.083	0.20	ug/l	50.0		100	85-115			
Manganese, Dissolved	50.0	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	50.0	0.23	1.0	ug/l	50.0		100	85-115			
Potassium, Total	2.04	0.068	0.50	mg/l	2.05		100	85-115			
Selenium, Total	50.2	0.067	0.40	ug/l	50.0		100	85-115			
Sodium, Total	2.18	0.10	1.0	mg/l	2.05		106	85-115			
Strontium, Total	47.9	0.036	0.20	ug/l	50.0		96	85-115			
Matrix Spike (W4B1851-MS1)											
					Source: 4A31006-02 Prepared: 02/22/24 Analyzed: 02/26/24						
Aluminum, Total	47.3	4.4	20	ug/l	50.0	ND	95	70-130			
Arsenic, Total	51.3	0.074	0.40	ug/l	50.0	0.490	101	70-130			
Barium, Total	155	0.14	1.0	ug/l	50.0	106	98	70-130			
Copper, Total	48.1	0.23	0.50	ug/l	50.0	ND	96	70-130			
Iron, Total	1120	3.9	20	ug/l	1050	ND	106	70-130			
Lead, Total	49.3	0.083	0.20	ug/l	50.0	ND	99	70-130			
Manganese, Total	48.1	0.23	1.0	ug/l	50.0	0.925	94	70-130			
Potassium, Total	5.66	0.068	0.50	mg/l	2.05	3.86	88	70-130			
Selenium, Total	49.5	0.067	0.40	ug/l	50.0	0.842	97	70-130			
Sodium, Total	30.0	0.10	1.0	mg/l	2.05	29.7	16	70-130			MS-02
Strontium, Total	626	0.036	0.20	ug/l	50.0	565	123	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1851 - EPA 200.8 (Continued)											
Matrix Spike (W4B1851-MS2)			Source: 4B06193-03			Prepared: 02/22/24			Analyzed: 02/26/24		
Aluminum, Total	48.4	4.4	20	ug/l	50.0	5.21	86	70-130			
Arsenic, Total	51.5	0.074	0.40	ug/l	50.0	1.28	100	70-130			
Barium, Total	113	0.14	1.0	ug/l	50.0	65.4	96	70-130			
Copper, Total	50.0	0.23	0.50	ug/l	50.0	2.29	95	70-130			
Iron, Total	1080	3.9	20	ug/l	1050	ND	103	70-130			
Lead, Total	49.4	0.083	0.20	ug/l	50.0	0.116	99	70-130			
Manganese, Total	50.6	0.23	1.0	ug/l	50.0	3.49	94	70-130			
Potassium, Total	4.58	0.068	0.50	mg/l	2.05	2.78	88	70-130			
Selenium, Total	51.4	0.067	0.40	ug/l	50.0	3.28	96	70-130			
Sodium, Total	88.8	0.10	1.0	mg/l	2.05	91.3	NR	70-130			MS-02
Strontium, Total	732	0.036	0.20	ug/l	50.0	707	50	70-130			MS-02
Matrix Spike Dup (W4B1851-MSD1)											
Source: 4A31006-02			Prepared: 02/22/24			Analyzed: 02/26/24					
Aluminum, Total	47.2	4.4	20	ug/l	50.0	ND	94	70-130	0.1	30	
Arsenic, Total	50.1	0.074	0.40	ug/l	50.0	0.490	99	70-130	2	30	
Barium, Total	155	0.14	1.0	ug/l	50.0	106	99	70-130	0.07	30	
Copper, Total	49.1	0.23	0.50	ug/l	50.0	ND	98	70-130	2	30	
Iron, Total	1090	3.9	20	ug/l	1050	ND	104	70-130	2	30	
Lead, Total	49.0	0.083	0.20	ug/l	50.0	ND	98	70-130	0.8	30	
Manganese, Total	49.2	0.23	1.0	ug/l	50.0	0.925	97	70-130	2	30	
Potassium, Total	5.80	0.068	0.50	mg/l	2.05	3.86	94	70-130	2	30	
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	0.842	98	70-130	0.6	30	
Sodium, Total	30.9	0.10	1.0	mg/l	2.05	29.7	61	70-130	3	30	MS-02
Strontium, Total	628	0.036	0.20	ug/l	50.0	565	127	70-130	0.3	30	
Matrix Spike Dup (W4B1851-MSD2)											
Source: 4B06193-03			Prepared: 02/22/24			Analyzed: 02/26/24					
Aluminum, Total	49.6	4.4	20	ug/l	50.0	5.21	89	70-130	2	30	
Arsenic, Total	52.4	0.074	0.40	ug/l	50.0	1.28	102	70-130	2	30	
Barium, Total	113	0.14	1.0	ug/l	50.0	65.4	95	70-130	0.5	30	
Copper, Total	51.0	0.23	0.50	ug/l	50.0	2.29	97	70-130	2	30	
Iron, Total	1120	3.9	20	ug/l	1050	ND	107	70-130	4	30	
Lead, Total	49.7	0.083	0.20	ug/l	50.0	0.116	99	70-130	0.6	30	
Manganese, Total	51.9	0.23	1.0	ug/l	50.0	3.49	97	70-130	3	30	
Potassium, Total	4.68	0.068	0.50	mg/l	2.05	2.78	93	70-130	2	30	
Selenium, Total	51.9	0.067	0.40	ug/l	50.0	3.28	97	70-130	0.9	30	
Sodium, Total	91.6	0.10	1.0	mg/l	2.05	91.3	17	70-130	3	30	MS-02
Strontium, Total	723	0.036	0.20	ug/l	50.0	707	33	70-130	1	30	MS-02



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC		RPD		Qualifier
								Limits	RPD	Limit	Limit	
Batch: W4B0665 - SM 9221B												
Blank (W4B0665-BLK1)												
Total Coliform	ND	1.1	1.1	MPN/100m L								

Prepared: 02/07/24 Analyzed: 02/09/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:21

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Using source temperature @20C
HT1.0	Holding time exceeded. Sample was received at the lab past holding time.
HT1.3	Holding time exceeded. Sample was analyzed past the holding time.
J	Estimated conc. detected <MRL and >MDL.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B07137

Project: COSM 97-005 - COPCs

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 3/01/2024

Received Date: 02/07/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

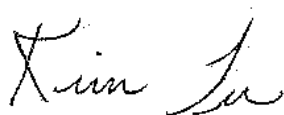
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/07/24 with the Chain-of-Custody document. The samples were received in good condition, at 3.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
PT-RO#3 - 515	Windsor Lee	4B07137-01	Water	02/07/24 12:55	
PT-RO#3 - 514	Windsor Lee	4B07137-02	Water	02/07/24 12:55	
Travel Blank	Windsor Lee	4B07137-03	Water	02/07/24 00:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗		
Bromomethane	74-83-9	⊗		
Chloroethane	75-00-3	⊗		
Di-isopropyl ether	108-20-3	⊗		
2-Butanone	78-93-3	⊗		
2,2-Dichloropropane	594-20-7	⊗		
Bromochloromethane	74-97-5	⊗		
1,1-Dichloropropene	563-58-6	⊗		
Dibromomethane	74-95-3	⊗		
1,3-Dichloropropane	142-28-9	⊗		
2-Hexanone	591-78-6	⊗		
Bromobenzene	108-86-1	⊗		
1,2,3-Trichloropropane	96-18-4	⊗		
p-Isopropyltoluene	99-87-6	⊗		
Hexachlorobutadiene	87-68-3	⊗		
1,3-Dichloropropene, Total	542-75-6	⊗		
Acetone	67-64-1	⊗		
Acrylonitrile	107-13-1	⊗		
EPA 537.1 in Water				
PFBS	375-73-5	⊗		
PFHxA	307-24-4	⊗		
HFPO-DA	13252-13-6	⊗		
PFHpA	375-85-9	⊗		
PFHxS	355-46-4	⊗		
ADONA	919005-14-4	⊗		
PFOA	335-67-1	⊗		
PFNA	375-95-1	⊗		
PFOS	1763-23-1	⊗		
9CI-PF3ONS	756426-58-1	⊗		
PFDA	335-76-2	⊗		
MeFOSAA	2355-31-9	⊗		
EtFOSAA	2991-50-6	⊗		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/01/2024 14:35

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 537.1 in Water (Continued)				
PUnA	2058-94-8	⊗		
11Cl-PF3OUdS	763051-92-9	⊗		
PFDaA	307-55-1	⊗		
PFTTrDA	72629-94-8	⊗		
PFTeDA	376-06-7	⊗		
13C2-PFHxA		⊗		
13C2-PFDA		⊗		
d5-EtFOSAA		⊗		
HFPO-DA-13C3		⊗		
SRL 524M-TCP in Water				
1,2,3-Trichloropropane	96-18-4		⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

Sample: PT-RO#3 - 515

Sampled: 02/07/24 12:55 by Windsor Lee

4B07137-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0740	Preparation: EPA 522/SPE		Prepared: 02/09/24 08:03		Analyst: mld		
1,4-Dioxane	0.033	0.028	0.070	ug/l	1	02/13/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	88%	Conc: 8.36	70-130			02/13/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1018	Preparation: EPA 5030B		Prepared: 02/13/24 10:21		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/13/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B0819	Preparation: EPA 537/SPE		Prepared: 02/09/24 14:22		Analyst: JNA		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	02/19/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	02/19/24	
ADONA	ND	0.48	1.7	ng/l	1	02/19/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/19/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	02/19/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/19/24	
PFBS	ND	0.50	1.7	ng/l	1	02/19/24	
PFDA	ND	0.39	1.7	ng/l	1	02/19/24	
PFDoA	ND	0.56	1.7	ng/l	1	02/19/24	
PFHpA	ND	0.46	1.7	ng/l	1	02/19/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/19/24	
PFHxS	ND	0.51	1.7	ng/l	1	02/19/24	
PFNA	ND	0.45	1.7	ng/l	1	02/19/24	
PFOA	ND	0.57	1.7	ng/l	1	02/19/24	
PFOS	ND	0.46	1.7	ng/l	1	02/19/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/19/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/19/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/19/24	
<i>Surrogate(s)</i>							
13C2-PFDA	110%	Conc: 38.0	70-130			02/19/24	
13C2-PFHxA	102%	Conc: 35.3	70-130			02/19/24	
d5-EtFOSAA	105%	Conc: 145	70-130			02/19/24	
HFPO-DA-13C3	97%	Conc: 33.3	70-130			02/19/24	

Volatile Organic Compounds by P&T and GC/MS

4B07137

Page 4 of 24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3 - 515

Sampled: 02/07/24 12:55 by Windsor Lee

4B07137-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1417		Preparation: EPA 5030B		Prepared: 02/16/24 12:10		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/17/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/17/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/17/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/17/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/17/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/17/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/17/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/17/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/17/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/17/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/17/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/17/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/17/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/17/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/17/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/17/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/17/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/17/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/17/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/17/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/17/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/17/24	
Acetone	ND	3.1	5.0	ug/l	1	02/17/24	
Benzene	ND	0.15	0.50	ug/l	1	02/17/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/17/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/17/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/17/24	
Bromoform	7.0	0.38	0.50	ug/l	1	02/17/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/17/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/17/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/17/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/17/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/17/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3 - 515

Sampled: 02/07/24 12:55 by Windsor Lee

4B07137-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1417		Preparation: EPA 5030B		Prepared: 02/16/24 12:10		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/17/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/17/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/17/24	
Dibromochloromethane	1.2	0.20	0.50	ug/l	1	02/17/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/17/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/17/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/17/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/17/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/17/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/17/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/17/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/17/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/17/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/17/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/17/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/17/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/17/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/17/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/17/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/17/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/17/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/17/24	
Styrene	ND	0.19	0.50	ug/l	1	02/17/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/17/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/17/24	
THMs, Total	8.2		0.50	ug/l	1	02/17/24	
Toluene	ND	0.29	0.50	ug/l	1	02/17/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/17/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/17/24	
Trichloroethene	2.3	0.18	0.50	ug/l	1	02/17/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/17/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3 - 515

Sampled: 02/07/24 12:55 by Windsor Lee

4B07137-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1417		Preparation: EPA 5030B			Prepared: 02/16/24 12:10		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/17/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/17/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	87%	Conc: 43.5	70-130			02/17/24	
4-Bromofluorobenzene	84%	Conc: 42.1	70-130			02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3 - 514

Sampled: 02/07/24 12:55 by Windsor Lee

4B07137-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0740	Preparation: EPA 522/SPE		Prepared: 02/09/24 08:03		Analyst: mld		
1,4-Dioxane	0.35	0.028	0.070	ug/l	1	02/13/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	89%	Conc: 9.08	70-130			02/13/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1018	Preparation: EPA 5030B		Prepared: 02/13/24 10:21		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/13/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B0819	Preparation: EPA 537/SPE		Prepared: 02/09/24 14:22		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.7	ng/l	1	02/19/24	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	02/19/24	
ADONA	ND	0.48	1.7	ng/l	1	02/19/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/19/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	02/19/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/19/24	
PFBS	ND	0.50	1.7	ng/l	1	02/19/24	
PFDA	ND	0.39	1.7	ng/l	1	02/19/24	
PFDoA	ND	0.57	1.7	ng/l	1	02/19/24	
PFHpA	ND	0.46	1.7	ng/l	1	02/19/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/19/24	
PFHxS	ND	0.51	1.7	ng/l	1	02/19/24	
PFNA	ND	0.45	1.7	ng/l	1	02/19/24	
PFOA	ND	0.58	1.7	ng/l	1	02/19/24	
PFOS	ND	0.46	1.7	ng/l	1	02/19/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/19/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/19/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/19/24	
<i>Surrogate(s)</i>							
13C2-PFDA	105%	Conc: 36.3	70-130			02/19/24	
13C2-PFHxA	94%	Conc: 32.6	70-130			02/19/24	
d5-EtFOSAA	100%	Conc: 139	70-130			02/19/24	
HFPO-DA-13C3	88%	Conc: 30.6	70-130			02/19/24	

Volatile Organic Compounds by P&T and GC/MS

4B07137

Page 8 of 24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3 - 514

Sampled: 02/07/24 12:55 by Windsor Lee

4B07137-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1417		Preparation: EPA 5030B		Prepared: 02/16/24 12:10		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/17/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/17/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/17/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/17/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/17/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/17/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/17/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/17/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/17/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/17/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/17/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/17/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/17/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/17/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/17/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/17/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/17/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/17/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/17/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/17/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/17/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/17/24	
Acetone	ND	3.1	5.0	ug/l	1	02/17/24	
Benzene	ND	0.15	0.50	ug/l	1	02/17/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/17/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/17/24	
Bromodichloromethane	0.55	0.24	0.50	ug/l	1	02/17/24	
Bromoform	6.9	0.38	0.50	ug/l	1	02/17/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/17/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/17/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/17/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/17/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/17/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3 - 514

Sampled: 02/07/24 12:55 by Windsor Lee

4B07137-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1417		Preparation: EPA 5030B			Prepared: 02/16/24 12:10		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/17/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/17/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/17/24	
Dibromochloromethane	2.4	0.20	0.50	ug/l	1	02/17/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/17/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/17/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/17/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/17/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/17/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/17/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/17/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/17/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/17/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/17/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/17/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/17/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/17/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/17/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/17/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/17/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/17/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/17/24	
Styrene	ND	0.19	0.50	ug/l	1	02/17/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/17/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
Tetrachloroethene	0.24	0.18	0.50	ug/l	1	02/17/24	J
THMs, Total	9.8		0.50	ug/l	1	02/17/24	
Toluene	ND	0.29	0.50	ug/l	1	02/17/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/17/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/17/24	
Trichloroethene	4.8	0.18	0.50	ug/l	1	02/17/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: PT-RO#3 - 514

Sampled: 02/07/24 12:55 by Windsor Lee

4B07137-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1417		Preparation: EPA 5030B			Prepared: 02/16/24 12:10		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/17/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/17/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	85%	Conc: 42.7	70-130			02/17/24	
4-Bromofluorobenzene	83%	Conc: 41.7	70-130			02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Travel Blank

Sampled: 02/07/24 0:00 by Windsor Lee

4B07137-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W4B0819

Preparation: EPA 537/SPE

Prepared: 02/09/24 14:22

Analyst: JNA

11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	02/19/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	02/19/24	
ADONA	ND	0.47	1.7	ng/l	1	02/19/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/19/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	02/19/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	02/19/24	
PFBS	ND	0.49	1.7	ng/l	1	02/19/24	
PFDA	ND	0.38	1.7	ng/l	1	02/19/24	
PFDoA	ND	0.55	1.7	ng/l	1	02/19/24	
PFHpA	ND	0.45	1.7	ng/l	1	02/19/24	
PFHxA	ND	0.41	1.7	ng/l	1	02/19/24	
PFHxS	ND	0.50	1.7	ng/l	1	02/19/24	
PFNA	ND	0.44	1.7	ng/l	1	02/19/24	
PFOA	ND	0.56	1.7	ng/l	1	02/19/24	
PFOS	ND	0.45	1.7	ng/l	1	02/19/24	
PFTeDA	ND	0.38	1.7	ng/l	1	02/19/24	
PFTrDA	ND	0.35	1.7	ng/l	1	02/19/24	
PFUnA	ND	0.40	1.7	ng/l	1	02/19/24	

Surrogate(s)

13C2-PFDA	100%	Conc: 33.9	70-130			02/19/24	
13C2-PFHxA	98%	Conc: 33.0	70-130			02/19/24	
d5-EtFOSAA	98%	Conc: 133	70-130			02/19/24	
HFPO-DA-13C3	90%	Conc: 30.5	70-130			02/19/24	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B1417

Preparation: EPA 5030B

Prepared: 02/16/24 12:10

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/17/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/17/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/17/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/17/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/17/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/17/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/17/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/17/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/17/24	

4B07137

Page 12 of 24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Travel Blank

Sampled: 02/07/24 0:00 by Windsor Lee

4B07137-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1417		Preparation: EPA 5030B			Prepared: 02/16/24 12:10		Analyst: ADM
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/17/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/17/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/17/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/17/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/17/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/17/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/17/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/17/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/17/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/17/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/17/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/17/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/17/24	
Acetone	1000	3.1	5.0	ug/l	1	02/17/24	E-01
Benzene	ND	0.15	0.50	ug/l	1	02/17/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/17/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/17/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/17/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/17/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/17/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/17/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/17/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/17/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/17/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/17/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/17/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/17/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/17/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/17/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/17/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/17/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/17/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/17/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Travel Blank

Sampled: 02/07/24 0:00 by Windsor Lee

4B07137-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B1417

Preparation: EPA 5030B

Prepared: 02/16/24 12:10

Analyst: ADM

Freon 113	ND	1.5	5.0	ug/l	1	02/17/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/17/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/17/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/17/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/17/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/17/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/17/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/17/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/17/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/17/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/17/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/17/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/17/24	
Styrene	ND	0.19	0.50	ug/l	1	02/17/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/17/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/17/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/17/24	
THMs, Total	ND		0.50	ug/l	1	02/17/24	
Toluene	ND	0.29	0.50	ug/l	1	02/17/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/17/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/17/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/17/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/17/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/17/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/17/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	82%	Conc: 41.2	70-130			02/17/24	
4-Bromofluorobenzene	84%	Conc: 42.2	70-130			02/17/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0740 - EPA 522											
Blank (W4B0740-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.41			ug/l	10.0		84	70-130			
LCS (W4B0740-BS1)											
1,4-Dioxane	2.13	0.028	0.070	ug/l	2.00		106	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	11.0			ug/l	10.0		110	70-130			
LCS Dup (W4B0740-BSD1)											
1,4-Dioxane	1.70	0.028	0.070	ug/l	2.00		85	70-130	22	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.66			ug/l	10.0		87	70-130			

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1018 - SRL 524M-TCP											
Blank (W4B1018-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W4B1018-BS1)											
1,2,3-Trichloropropane	0.0179	0.0012	0.0050	ug/l	0.0200		90	80-120			
LCS Dup (W4B1018-BSD1)											
1,2,3-Trichloropropane	0.0168	0.0012	0.0050	ug/l	0.0200		84	80-120	6	20	
Duplicate (W4B1018-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B0819 - EPA 537.1									
Blank (W4B0819-BLK1)					Prepared: 02/09/24 Analyzed: 02/19/24				
11CI-PF3OUdS	ND	0.56	2.0	ng/l					
9CI-PF3ONS	ND	0.53	2.0	ng/l					
ADONA	ND	0.55	2.0	ng/l					
EtFOSAA	ND	0.48	2.0	ng/l					
HFPO-DA	ND	0.87	2.0	ng/l					
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	41.8			ng/l	40.0		105 70-130		
13C2-PFHxA	40.9			ng/l	40.0		102 70-130		
d5-EtFOSAA	164			ng/l	160		103 70-130		
HFPO-DA-13C3	39.3			ng/l	40.0		98 70-130		
LCS (W4B0819-BS1)					Prepared: 02/09/24 Analyzed: 02/19/24				
11CI-PF3OUdS	67.2	0.56	2.0	ng/l	80.0		84 70-130		
9CI-PF3ONS	67.4	0.53	2.0	ng/l	80.0		84 70-130		
ADONA	70.8	0.55	2.0	ng/l	80.0		89 70-130		
EtFOSAA	70.2	0.48	2.0	ng/l	80.0		88 70-130		
HFPO-DA	68.5	0.87	2.0	ng/l	80.0		86 70-130		
MeFOSAA	70.0	0.58	2.0	ng/l	80.0		87 70-130		
PFBS	72.2	0.58	2.0	ng/l	80.0		90 70-130		
PFDA	70.6	0.45	2.0	ng/l	80.0		88 70-130		
PFDoA	71.9	0.66	2.0	ng/l	80.0		90 70-130		
PFHpA	71.0	0.53	2.0	ng/l	80.0		89 70-130		
PFHxA	70.1	0.49	2.0	ng/l	80.0		88 70-130		
PFHxS	72.1	0.59	2.0	ng/l	80.0		90 70-130		
PFNA	71.6	0.52	2.0	ng/l	80.0		89 70-130		
PFOA	71.2	0.67	2.0	ng/l	80.0		89 70-130		
PFOS	69.6	0.53	2.0	ng/l	80.0		87 70-130		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B0819 - EPA 537.1 (Continued)										
LCS (W4B0819-BS1)					Prepared: 02/09/24 Analyzed: 02/19/24					
PFTeDA	65.8	0.45	2.0	ng/l	80.0		82 70-130			
PFTTrDA	67.1	0.42	2.0	ng/l	80.0		84 70-130			
PFUnA	70.3	0.48	2.0	ng/l	80.0		88 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	42.3			ng/l	40.0		106 70-130			
13C2-PFHxA	41.1			ng/l	40.0		103 70-130			
d5-EtFOSAA	160			ng/l	160		100 70-130			
HFPO-DA-13C3	39.4			ng/l	40.0		99 70-130			
LCS Dup (W4B0819-BSD1)					Prepared: 02/09/24 Analyzed: 02/19/24					
11Cl-PF3OUdS	68.6	0.56	2.0	ng/l	80.0		86 70-130	2	30	
9Cl-PF3ONS	69.7	0.53	2.0	ng/l	80.0		87 70-130	3	30	
ADONA	73.7	0.55	2.0	ng/l	80.0		92 70-130	4	30	
EtFOSAA	73.0	0.48	2.0	ng/l	80.0		91 70-130	4	30	
HFPO-DA	70.7	0.87	2.0	ng/l	80.0		88 70-130	3	30	
MeFOSAA	72.9	0.58	2.0	ng/l	80.0		91 70-130	4	30	
PFBS	73.4	0.58	2.0	ng/l	80.0		92 70-130	2	30	
PFDA	74.8	0.45	2.0	ng/l	80.0		93 70-130	6	30	
PFDoA	74.2	0.66	2.0	ng/l	80.0		93 70-130	3	30	
PFHpA	73.7	0.53	2.0	ng/l	80.0		92 70-130	4	30	
PFHxA	73.5	0.49	2.0	ng/l	80.0		92 70-130	5	30	
PFHxS	73.4	0.59	2.0	ng/l	80.0		92 70-130	2	30	
PFNA	75.4	0.52	2.0	ng/l	80.0		94 70-130	5	30	
PFOA	74.3	0.67	2.0	ng/l	80.0		93 70-130	4	30	
PFOS	71.3	0.53	2.0	ng/l	80.0		89 70-130	2	30	
PFTeDA	68.9	0.45	2.0	ng/l	80.0		86 70-130	5	30	
PFTTrDA	72.0	0.42	2.0	ng/l	80.0		90 70-130	7	30	
PFUnA	74.9	0.48	2.0	ng/l	80.0		94 70-130	6	30	
<i>Surrogate(s)</i>										
13C2-PFDA	44.1			ng/l	40.0		110 70-130			
13C2-PFHxA	42.4			ng/l	40.0		106 70-130			
d5-EtFOSAA	166			ng/l	160		104 70-130			
HFPO-DA-13C3	41.6			ng/l	40.0		104 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B1417 - EPA 524.2											
Blank (W4B1417-BLK1)						Prepared: 02/16/24 Analyzed: 02/17/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1417 - EPA 524.2 (Continued)											
Blank (W4B1417-BLK1)						Prepared: 02/16/24 Analyzed: 02/17/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	0.352	0.35	0.50	ug/l							B-02, J
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.2			ug/l	50.0		88	70-130			
4-Bromofluorobenzene	45.6			ug/l	50.0		91	70-130			
LCS (W4B1417-BS1)						Prepared: 02/16/24 Analyzed: 02/17/24					
1,1,1,2-Tetrachloroethane	5.18	0.24	0.50	ug/l	5.00		104	70-130			
1,1,1-Trichloroethane	5.02	0.26	0.50	ug/l	5.00		100	70-130			
1,1,2,2-Tetrachloroethane	5.35	0.20	0.50	ug/l	5.00		107	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1417 - EPA 524.2 (Continued)										
LCS (W4B1417-BS1)					Prepared: 02/16/24 Analyzed: 02/17/24					
1,1,2-Trichloroethane	5.09	0.19	0.50	ug/l	5.00		102 70-130			
1,1-Dichloroethane	5.09	0.27	0.50	ug/l	5.00		102 70-130			
1,1-Dichloroethene	4.99	0.16	0.50	ug/l	5.00		100 70-130			
1,1-Dichloropropene	4.98	0.14	0.50	ug/l	5.00		100 70-130			
1,2,3-Trichlorobenzene	5.13	0.40	0.50	ug/l	5.00		103 70-130			
1,2,3-Trichloropropane	5.44	0.22	0.50	ug/l	5.00		109 70-130			
1,2,4-Trichlorobenzene	5.17	0.17	0.50	ug/l	5.00		103 70-130			
1,2,4-Trimethylbenzene	5.44	0.20	0.50	ug/l	5.00		109 70-130			
1,2-Dichloroethane	5.09	0.24	0.50	ug/l	5.00		102 70-130			
1,2-Dichloropropane	5.00	0.13	0.50	ug/l	5.00		100 70-130			
1,3,5-Trimethylbenzene	5.35	0.17	0.50	ug/l	5.00		107 70-130			
1,3-Dichloropropane	5.44	0.27	0.50	ug/l	5.00		109 70-130			
2,2-Dichloropropane	4.58	0.17	0.50	ug/l	5.00		92 70-130			
2-Butanone	4.70	1.5	5.0	ug/l	5.00		94 70-130			J
2-Chlorotoluene	5.53	0.15	0.50	ug/l	5.00		111 70-130			
2-Hexanone	5.35	1.2	5.0	ug/l	5.00		107 70-130			
4-Chlorotoluene	5.46	0.15	0.50	ug/l	5.00		109 70-130			
4-Methyl-2-pentanone	5.58	1.8	5.0	ug/l	5.00		112 70-130			
Acetone	47.8	3.1	5.0	ug/l	50.0		96 70-130			
Benzene	5.15	0.15	0.50	ug/l	5.00		103 70-130			
Bromobenzene	5.26	0.15	0.50	ug/l	5.00		105 70-130			
Bromochloromethane	5.13	0.15	0.50	ug/l	5.00		103 70-130			
Bromodichloromethane	4.89	0.24	0.50	ug/l	5.00		98 70-130			
Bromoform	5.27	0.38	0.50	ug/l	5.00		105 70-130			
Bromomethane	5.12	0.27	0.50	ug/l	5.00		102 70-130			
Carbon Disulfide	5.11	0.25	0.50	ug/l	5.00		102 70-130			
Carbon tetrachloride	5.17	0.27	0.50	ug/l	5.00		103 70-130			
Chlorobenzene	5.40	0.15	0.50	ug/l	5.00		108 70-130			
Chloroethane	5.02	0.17	0.50	ug/l	5.00		100 70-130			
Chloroform	5.02	0.27	0.50	ug/l	5.00		100 70-130			
Chloromethane	4.87	0.23	0.50	ug/l	5.00		97 70-130			
cis-1,2-Dichloroethene	4.96	0.25	0.50	ug/l	5.00		99 70-130			
cis-1,3-Dichloropropene	5.34	0.30	0.50	ug/l	5.00		107 70-130			
Dibromochloromethane	5.16	0.20	0.50	ug/l	5.00		103 70-130			
Dibromomethane	5.14	0.20	0.50	ug/l	5.00		103 70-130			
Dichlorodifluoromethane (Freon 12)	4.95	0.45	0.50	ug/l	5.00		99 70-130			
Di-isopropyl ether	20.8	1.1	2.0	ug/l	20.0		104 70-130			
Ethyl tert-butyl ether	20.1	1.0	2.0	ug/l	20.0		101 70-130			
Ethylbenzene	5.22	0.21	0.50	ug/l	5.00		104 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1417 - EPA 524.2 (Continued)										
LCS (W4B1417-BS1)					Prepared: 02/16/24 Analyzed: 02/17/24					
Freon 113	4.96	1.5	5.0	ug/l	5.00	99	70-130			J
Hexachlorobutadiene	5.31	0.40	0.50	ug/l	5.00	106	70-130			
Isopropylbenzene	5.28	0.18	0.50	ug/l	5.00	106	70-130			
m,p-Xylene	5.19	0.33	0.50	ug/l	5.00	104	70-130			
m-Dichlorobenzene	5.30	0.14	0.50	ug/l	5.00	106	70-130			
Methyl tert-butyl ether (MTBE)	21.0	0.94	2.0	ug/l	20.0	105	70-130			
Methylene chloride	4.77	0.30	0.50	ug/l	5.00	95	70-130			
Naphthalene	4.89	0.35	0.50	ug/l	5.00	98	70-130			
n-Butylbenzene	5.58	0.29	0.50	ug/l	5.00	112	70-130			
n-Propylbenzene	5.30	0.18	0.50	ug/l	5.00	106	70-130			
o-Dichlorobenzene	5.20	0.19	0.50	ug/l	5.00	104	70-130			
o-Xylene	5.22	0.20	0.50	ug/l	5.00	104	70-130			
p-Dichlorobenzene	5.41	0.18	0.50	ug/l	5.00	108	70-130			
p-Isopropyltoluene	5.35	0.25	0.50	ug/l	5.00	107	70-130			
sec-Butylbenzene	5.34	0.24	0.50	ug/l	5.00	107	70-130			
Styrene	5.36	0.19	0.50	ug/l	5.00	107	70-130			
Tert-amyl methyl ether	21.7	0.59	2.0	ug/l	20.0	108	70-130			
tert-Butylbenzene	5.37	0.18	0.50	ug/l	5.00	107	70-130			
Tetrachloroethene	5.03	0.18	0.50	ug/l	5.00	101	70-130			
Toluene	5.17	0.29	0.50	ug/l	5.00	103	70-130			
trans-1,2-Dichloroethene	5.11	0.26	0.50	ug/l	5.00	102	70-130			
trans-1,3-Dichloropropene	5.23	0.32	0.50	ug/l	5.00	105	70-130			
Trichloroethene	5.12	0.18	0.50	ug/l	5.00	102	70-130			
Trichlorofluoromethane	5.07	0.18	0.50	ug/l	5.00	101	70-130			
Vinyl chloride	4.98	0.18	0.50	ug/l	5.00	100	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	51.9			ug/l	50.0	104	70-130			
4-Bromofluorobenzene	52.0			ug/l	50.0	104	70-130			
LCS Dup (W4B1417-BSD1)					Prepared: 02/16/24 Analyzed: 02/17/24					
1,1,1,2-Tetrachloroethane	5.00	0.24	0.50	ug/l	5.00	100	70-130	4	30	
1,1,1-Trichloroethane	4.84	0.26	0.50	ug/l	5.00	97	70-130	4	30	
1,1,2,2-Tetrachloroethane	5.17	0.20	0.50	ug/l	5.00	103	70-130	3	30	
1,1,2-Trichloroethane	5.04	0.19	0.50	ug/l	5.00	101	70-130	1	30	
1,1-Dichloroethane	4.97	0.27	0.50	ug/l	5.00	99	70-130	2	30	
1,1-Dichloroethene	4.81	0.16	0.50	ug/l	5.00	96	70-130	4	30	
1,1-Dichloropropene	4.80	0.14	0.50	ug/l	5.00	96	70-130	4	30	
1,2,3-Trichlorobenzene	5.09	0.40	0.50	ug/l	5.00	102	70-130	0.7	30	
1,2,3-Trichloropropane	5.30	0.22	0.50	ug/l	5.00	106	70-130	3	30	
1,2,4-Trichlorobenzene	5.12	0.17	0.50	ug/l	5.00	102	70-130	0.9	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1417 - EPA 524.2 (Continued)										
LCS Dup (W4B1417-BSD1)					Prepared: 02/16/24 Analyzed: 02/17/24					
1,2,4-Trimethylbenzene	5.07	0.20	0.50	ug/l	5.00	101	70-130	7	30	
1,2-Dichloroethane	5.05	0.24	0.50	ug/l	5.00	101	70-130	0.8	30	
1,2-Dichloropropane	4.93	0.13	0.50	ug/l	5.00	99	70-130	1	30	
1,3,5-Trimethylbenzene	4.98	0.17	0.50	ug/l	5.00	100	70-130	7	30	
1,3-Dichloropropane	5.34	0.27	0.50	ug/l	5.00	107	70-130	2	30	
2,2-Dichloropropane	4.33	0.17	0.50	ug/l	5.00	87	70-130	5	30	
2-Butanone	4.54	1.5	5.0	ug/l	5.00	91	70-130	4	30	J
2-Chlorotoluene	5.22	0.15	0.50	ug/l	5.00	104	70-130	6	30	
2-Hexanone	5.32	1.2	5.0	ug/l	5.00	106	70-130	0.6	30	
4-Chlorotoluene	5.16	0.15	0.50	ug/l	5.00	103	70-130	6	30	
4-Methyl-2-pentanone	5.48	1.8	5.0	ug/l	5.00	110	70-130	2	30	
Acetone	49.8	3.1	5.0	ug/l	50.0	100	70-130	4	30	
Benzene	5.04	0.15	0.50	ug/l	5.00	101	70-130	2	30	
Bromobenzene	4.98	0.15	0.50	ug/l	5.00	100	70-130	5	30	
Bromochloromethane	5.08	0.15	0.50	ug/l	5.00	102	70-130	0.9	30	
Bromodichloromethane	4.79	0.24	0.50	ug/l	5.00	96	70-130	2	30	
Bromoform	5.12	0.38	0.50	ug/l	5.00	102	70-130	3	30	
Bromomethane	4.99	0.27	0.50	ug/l	5.00	100	70-130	3	30	
Carbon Disulfide	4.86	0.25	0.50	ug/l	5.00	97	70-130	5	30	
Carbon tetrachloride	4.89	0.27	0.50	ug/l	5.00	98	70-130	6	30	
Chlorobenzene	5.25	0.15	0.50	ug/l	5.00	105	70-130	3	30	
Chloroethane	4.97	0.17	0.50	ug/l	5.00	99	70-130	1	30	
Chloroform	4.90	0.27	0.50	ug/l	5.00	98	70-130	2	30	
Chloromethane	4.76	0.23	0.50	ug/l	5.00	95	70-130	2	30	
cis-1,2-Dichloroethene	4.88	0.25	0.50	ug/l	5.00	98	70-130	2	30	
cis-1,3-Dichloropropene	5.16	0.30	0.50	ug/l	5.00	103	70-130	3	30	
Dibromochloromethane	5.11	0.20	0.50	ug/l	5.00	102	70-130	1	30	
Dibromomethane	5.08	0.20	0.50	ug/l	5.00	102	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	4.78	0.45	0.50	ug/l	5.00	96	70-130	3	30	
Di-isopropyl ether	20.7	1.1	2.0	ug/l	20.0	103	70-130	0.4	30	
Ethyl tert-butyl ether	20.1	1.0	2.0	ug/l	20.0	100	70-130	0.3	30	
Ethylbenzene	4.92	0.21	0.50	ug/l	5.00	98	70-130	6	30	
Freon 113	4.84	1.5	5.0	ug/l	5.00	97	70-130	3	30	J
Hexachlorobutadiene	4.99	0.40	0.50	ug/l	5.00	100	70-130	6	30	
Isopropylbenzene	4.90	0.18	0.50	ug/l	5.00	98	70-130	8	30	
m,p-Xylene	4.92	0.33	0.50	ug/l	5.00	98	70-130	5	30	
m-Dichlorobenzene	5.06	0.14	0.50	ug/l	5.00	101	70-130	5	30	
Methyl tert-butyl ether (MTBE)	21.1	0.94	2.0	ug/l	20.0	106	70-130	0.5	30	
Methylene chloride	4.73	0.30	0.50	ug/l	5.00	95	70-130	0.9	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/01/2024 14:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1417 - EPA 524.2 (Continued)										
LCS Dup (W4B1417-BSD1)					Prepared: 02/16/24 Analyzed: 02/17/24					
Naphthalene	4.93	0.35	0.50	ug/l	5.00	99	70-130	0.7	30	
n-Butylbenzene	5.20	0.29	0.50	ug/l	5.00	104	70-130	7	30	
n-Propylbenzene	4.87	0.18	0.50	ug/l	5.00	97	70-130	8	30	
o-Dichlorobenzene	4.97	0.19	0.50	ug/l	5.00	99	70-130	4	30	
o-Xylene	4.91	0.20	0.50	ug/l	5.00	98	70-130	6	30	
p-Dichlorobenzene	5.14	0.18	0.50	ug/l	5.00	103	70-130	5	30	
p-Isopropyltoluene	4.98	0.25	0.50	ug/l	5.00	100	70-130	7	30	
sec-Butylbenzene	4.93	0.24	0.50	ug/l	5.00	99	70-130	8	30	
Styrene	5.11	0.19	0.50	ug/l	5.00	102	70-130	5	30	
Tert-amyl methyl ether	21.2	0.59	2.0	ug/l	20.0	106	70-130	2	30	
tert-Butylbenzene	4.99	0.18	0.50	ug/l	5.00	100	70-130	7	30	
Tetrachloroethene	4.87	0.18	0.50	ug/l	5.00	97	70-130	3	30	
Toluene	4.90	0.29	0.50	ug/l	5.00	98	70-130	5	30	
trans-1,2-Dichloroethene	4.88	0.26	0.50	ug/l	5.00	98	70-130	5	30	
trans-1,3-Dichloropropene	5.16	0.32	0.50	ug/l	5.00	103	70-130	1	30	
Trichloroethene	4.93	0.18	0.50	ug/l	5.00	99	70-130	4	30	
Trichlorofluoromethane	4.85	0.18	0.50	ug/l	5.00	97	70-130	4	30	
Vinyl chloride	4.81	0.18	0.50	ug/l	5.00	96	70-130	4	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	51.1			ug/l	50.0	102	70-130			
4-Bromofluorobenzene	51.3			ug/l	50.0	103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/01/2024 14:35

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
E-01	The concentration indicated for this analyte is an estimated value above the calibration range.
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B12117

Report Date: 4/29/2024

Received Date: 2/12/2024

Project: City of Santa Monica - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

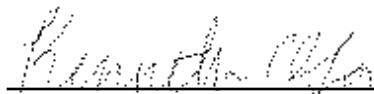
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/12/24 with the Chain-of-Custody document. The samples were received in good condition, at 11.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 10:20

Case Narrative

This is a Supplement to the Certificate of Analysis previously issued 4/4/2024 for the above referenced Project to report additional metals requested by Steven Shiokari.

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-1-57	Windsor Lee	4B12117-02	Water	02/12/24 12:10	
AT-RES-1-522	Windsor Lee	4B12117-03	Water	02/12/24 13:30	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 200.8 in Water				
Uranium, Total	7440-61-1			✘

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:20

Sample Results

Sample: AT-RES-1-522

Sampled: 02/12/24 13:30 by Windsor Lee

4B12117-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Antimony, Total	ND	0.089	0.50	ug/l	1	02/28/24	
Beryllium, Total	ND	0.029	0.10	ug/l	1	02/28/24	
Cadmium, Total	ND	0.042	0.20	ug/l	1	02/28/24	
Chromium, Total	0.18	0.089	0.20	ug/l	1	02/28/24	J
Nickel, Total	1.6	0.40	2.0	ug/l	1	02/28/24	J
Silver, Total	ND	0.027	0.20	ug/l	1	02/28/24	
Thallium, Total	ND	0.021	0.20	ug/l	1	02/28/24	
Uranium, Total	2.9	0.02	0.20	ug/l	1	02/28/24	
Vanadium, Total	0.41	0.16	0.50	ug/l	1	02/28/24	J
Zinc, Total	ND	1.7	10	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:20

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8											
Blank (W4B2097-BLK1)						Prepared: 02/26/24 Analyzed: 02/28/24					
Antimony, Total	ND	0.089	0.50	ug/l							
Beryllium, Total	ND	0.029	0.10	ug/l							
Cadmium, Total	ND	0.042	0.20	ug/l							
Chromium, Total	ND	0.089	0.20	ug/l							
Nickel, Total	ND	0.40	2.0	ug/l							
Silver, Total	ND	0.027	0.20	ug/l							
Thallium, Total	ND	0.021	0.20	ug/l							
Uranium, Total	ND	0.02	0.20	ug/l							
Vanadium, Total	ND	0.16	0.50	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W4B2097-BS1)											
Prepared: 02/26/24 Analyzed: 02/28/24											
Antimony, Total	50.2	0.089	0.50	ug/l	50.0		100	85-115			
Beryllium, Total	49.3	0.029	0.10	ug/l	50.0		99	85-115			
Cadmium, Total	50.3	0.042	0.20	ug/l	50.0		100	85-115			
Chromium, Total	53.3	0.089	0.20	ug/l	50.0		106	85-115			
Nickel, Total	53.5	0.40	2.0	ug/l	50.0		107	85-115			
Silver, Total	51.3	0.027	0.20	ug/l	50.0		103	85-115			
Thallium, Total	49.6	0.021	0.20	ug/l	50.0		99	85-115			
Uranium, Total	47.5	0.02	0.20	ug/l	50.0		95	85-115			
Vanadium, Total	52.7	0.16	0.50	ug/l	50.0		105	85-115			
Zinc, Total	50.6	1.7	10	ug/l	50.0		101	85-115			
Matrix Spike (W4B2097-MS1)											
Source: 4B12117-02						Prepared: 02/26/24 Analyzed: 02/28/24					
Antimony, Total	51.9	0.089	0.50	ug/l	50.0	0.0892	104	70-130			
Beryllium, Total	50.1	0.029	0.10	ug/l	50.0	ND	100	70-130			
Cadmium, Total	49.2	0.042	0.20	ug/l	50.0	ND	98	70-130			
Chromium, Total	52.1	0.089	0.20	ug/l	50.0	0.403	103	70-130			
Nickel, Total	50.5	0.40	2.0	ug/l	50.0	ND	101	70-130			
Silver, Total	49.8	0.027	0.20	ug/l	50.0	ND	99	70-130			
Thallium, Total	50.3	0.021	0.20	ug/l	50.0	ND	101	70-130			
Uranium, Total	62.6	0.02	0.20	ug/l	50.0	11.4	102	70-130			
Vanadium, Total	54.4	0.16	0.50	ug/l	50.0	2.05	105	70-130			
Zinc, Total	56.5	1.7	10	ug/l	50.0	8.74	95	70-130			
Matrix Spike (W4B2097-MS2)											
Source: 4B13138-03						Prepared: 02/26/24 Analyzed: 02/28/24					
Antimony, Total	50.3	0.089	0.50	ug/l	50.0	ND	100	70-130			
Beryllium, Total	47.5	0.029	0.10	ug/l	50.0	ND	95	70-130			
Cadmium, Total	48.6	0.042	0.20	ug/l	50.0	ND	97	70-130			
Chromium, Total	51.8	0.089	0.20	ug/l	50.0	0.196	103	70-130			
Nickel, Total	50.9	0.40	2.0	ug/l	50.0	ND	102	70-130			
Silver, Total	49.5	0.027	0.20	ug/l	50.0	ND	99	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:20

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Matrix Spike (W4B2097-MS2)			Source: 4B13138-03			Prepared: 02/26/24			Analyzed: 02/28/24		
Thallium, Total	49.6	0.021	0.20	ug/l	50.0	ND	99	70-130			
Uranium, Total	51.8	0.02	0.20	ug/l	50.0	2.63	98	70-130			
Vanadium, Total	52.4	0.16	0.50	ug/l	50.0	0.403	104	70-130			
Zinc, Total	48.7	1.7	10	ug/l	50.0	ND	97	70-130			
Matrix Spike Dup (W4B2097-MSD1)			Source: 4B12117-02			Prepared: 02/26/24			Analyzed: 02/28/24		
Antimony, Total	51.6	0.089	0.50	ug/l	50.0	0.0892	103	70-130	0.6	30	
Beryllium, Total	49.8	0.029	0.10	ug/l	50.0	ND	100	70-130	0.5	30	
Cadmium, Total	49.3	0.042	0.20	ug/l	50.0	ND	99	70-130	0.3	30	
Chromium, Total	52.6	0.089	0.20	ug/l	50.0	0.403	104	70-130	0.9	30	
Nickel, Total	50.5	0.40	2.0	ug/l	50.0	ND	101	70-130	0.1	30	
Silver, Total	49.8	0.027	0.20	ug/l	50.0	ND	99	70-130	0.02	30	
Thallium, Total	50.3	0.021	0.20	ug/l	50.0	ND	100	70-130	0.1	30	
Uranium, Total	62.6	0.02	0.20	ug/l	50.0	11.4	102	70-130	0.08	30	
Vanadium, Total	54.4	0.16	0.50	ug/l	50.0	2.05	105	70-130	0.04	30	
Zinc, Total	56.3	1.7	10	ug/l	50.0	8.74	95	70-130	0.3	30	
Matrix Spike Dup (W4B2097-MSD2)			Source: 4B13138-03			Prepared: 02/26/24			Analyzed: 02/28/24		
Antimony, Total	50.4	0.089	0.50	ug/l	50.0	ND	101	70-130	0.3	30	
Beryllium, Total	47.7	0.029	0.10	ug/l	50.0	ND	95	70-130	0.5	30	
Cadmium, Total	49.0	0.042	0.20	ug/l	50.0	ND	98	70-130	0.7	30	
Chromium, Total	53.1	0.089	0.20	ug/l	50.0	0.196	106	70-130	2	30	
Nickel, Total	52.3	0.40	2.0	ug/l	50.0	ND	105	70-130	3	30	
Silver, Total	50.0	0.027	0.20	ug/l	50.0	ND	100	70-130	1	30	
Thallium, Total	50.1	0.021	0.20	ug/l	50.0	ND	100	70-130	0.9	30	
Uranium, Total	52.2	0.02	0.20	ug/l	50.0	2.63	99	70-130	0.7	30	
Vanadium, Total	53.8	0.16	0.50	ug/l	50.0	0.403	107	70-130	3	30	
Zinc, Total	48.4	1.7	10	ug/l	50.0	ND	97	70-130	0.7	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:20

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order #

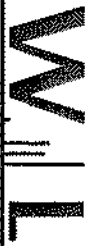
4812117

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles	PROJECT: COSM 97-005 - Background Water Quality	ANALYSES REQUESTED										SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018	PHONE: (213) 271-2237 ckindle@BrwnCald.com	140.1 Odor, 2120B Color	200.7/200.8 Total&Dissolved Metals*	alkalinity, TDS	300.0 Cl, F, SO4	300.1**	350.1 Ammonia, 353.2 NO2, NO3	365.3 PO4	Aggressive Index, CCP, LSI, Hardness	9215E TPC-Simplate	9221 MFT	<input type="checkbox"/> Same Day Rush 150%	<input type="checkbox"/> 24 Hour Rush 100%
PROJECT MANAGER Chris Kindle	SAMPLER Windsor Lee	Invoice to Rose Ford, Rford@BrwnCald.com										<input type="checkbox"/> 48-72 Hour Rush 75%	<input type="checkbox"/> 4 - 5 Day Rush 30%
												<input type="checkbox"/> Rush Extractions 50%	<input type="checkbox"/> 10 - 15 Business Days
												<input type="checkbox"/> QA/QC Data Package	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMP. TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	140.1 Odor, 2120B Color	200.7/200.8 Total&Dissolved Metals*	alkalinity, TDS	300.0 Cl, F, SO4	300.1**	350.1 Ammonia, 353.2 NO2, NO3	365.3 PO4	Aggressive Index, CCP, LSI, Hardness	9215E TPC-Simplate	9221 MFT	Charges will apply for weekends/holidays	Method of Shipment:	COMMENTS
	2/12/24	12:15	grab	AT-GS-1-54	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			*Bacteriological Testing has a strict 8 hour holding time. Lab must receive the samples within 6 hours of collection to have sufficient time to prepare and incubate the samples before expiration.
	2/12/24	12:10	grab	AT-GS-1-57	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	2/12/24	1:30	grab	AT-RES-1-522	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	2/12/24			Field blank *	2													
	2/12/24			Trip blank *	2													*Total Metals: B, Ca, Fe, K, Mg, Na, Silica, Al, As, Ba, Cu, Mn, Pb, Se, Sr
																		*Dissolved Metals: Fe, Silica, Mn
																		**300.1: Bromate, Bromide, Chlorate, Chlorite
																		*not sure what these are - LKA
																		2/12

RELINQUISHED BY Windsor Lee	DATE / TIME 2/12/24 - 2:25 pm	RECEIVED BY Magaly S	14:25 2-12-24	SAMPLE CONDITION: Actual Temperature: Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY Magaly S	DATE / TIME 2-12-24 17:08	RECEIVED BY	2/12/24 17:00		
RELINQUISHED BY	DATE / TIME	RECEIVED BY			



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **4812117**
 WKO Logged by: Jerico Bololano
 Samples Checked by: Jerico Bololano

Date/Time Received: 02/12/24 @ 17:00
 # of Samples: 03
 Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Project Manager notified about COC discrepancy?

Receipt Information

Sample Temperature 11.5°C
 Samples received on ice?
 Ice Type (Blue/Wet) Wet
 All samples intact?
 Samples in proper containers?
 Sufficient sample volume?
 Samples Intact?
 Received within holding time?
 Project Manager notified?

Sample labels checked for correct preservation?

VOC Headspace: (No) none, If Yes (See comment)
 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT

pH verified upon receipt?
 Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1,
 525.2<2; 6710B<2; 608.3 5-9

Free Chlorine Tested <0.1 (Organic Analyses)

O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Prepared by: _____ Date: 02/12/24
 Signature: Jerico Bololano

Work Orders: 4B12117

Project: City of Santa Monica - Background Water Quality

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 4/04/2024

Received Date: 2/12/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

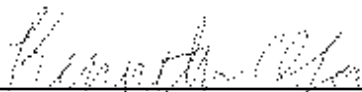
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/12/24 with the Chain-of-Custody document. The samples were received in good condition, at 11.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-1-54	Windsor Lee	4B12117-01	Water	02/12/24 12:15	
AT-GS-1-57	Windsor Lee	4B12117-02	Water	02/12/24 12:10	
AT-RES-1-522	Windsor Lee	4B12117-03	Water	02/12/24 13:30	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Sample Results

Sample: AT-GS-1-54

Sampled: 02/12/24 12:15 by Windsor Lee

4B12117-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.25	0.0090	0.10	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	11.9			AGI	1	03/13/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B0991	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 09:39		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/13/24 10:19	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0090	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 15:58		Analyst: YMT		
Ammonia as N	0.32	0.017	0.10	mg/l	1	03/04/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1076	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 16:55		Analyst: ISM		
Nitrate as N	6.5	0.040	0.20	mg/l	1	02/13/24 20:18	
Nitrite as N	44	42	100	ug/l	1	02/13/24 20:18	J
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO ₄ , Total	0.28	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1028	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 12:23		Analyst: hhl		
Color	ND		3.0	Color Units	1	02/13/24 13:27	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1064	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 15:58		Analyst: mes		
Alkalinity as CaCO ₃	320	7.2	20	mg/l	1	02/14/24	
Bicarbonate Alkalinity as HCO ₃	390	8.8	24	mg/l	1	02/14/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/14/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/14/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0551	Preparation: _NONE (METALS)		Prepared: 03/07/24 11:21		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	5.96	-100	-100	N/A	1	03/07/24	A-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Sample Results

(Continued)

Sample: AT-GS-1-54

Sampled: 02/12/24 12:15 by Windsor Lee

4B12117-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 20 C	-0.027	-20.0	-10.0	LSI	1	03/07/24	
Langelier Index @ 60 C	0.484	-20.0	-10.0	LSI	1	03/07/24	
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 18:39		Analyst: bel		
Total Dissolved Solids	880	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B0996	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 09:44		Analyst: mes		
pH	6.96	0.10	0.10	pH Units	1	02/13/24 10:19	*

Metals by EPA 200 Series Methods

Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/26/24 11:37		Analyst: kvm		
Hardness as CaCO3, Total	489	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2096	Preparation: EPA 200.2		Prepared: 02/26/24 11:37		Analyst: kvm		
Boron, Total	140	1.3	10	ug/l	1	02/28/24	
Calcium, Total	110	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	51.7	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	38	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	38	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097	Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/28/24	
Arsenic, Total	0.70	0.074	0.40	ug/l	1	02/28/24	
Barium, Total	53	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	0.48	0.23	0.50	ug/l	1	02/28/24	J
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	20	3.9	20	ug/l	1	02/28/24	J
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	9.6	0.11	1.0	ug/l	1	02/28/24	
Manganese, Total	9.9	0.23	1.0	ug/l	1	02/28/24	
Potassium, Total	2.5	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	3.5	0.067	0.40	ug/l	1	02/28/24	
Sodium, Total	110	0.10	1.0	mg/l	1	02/28/24	
Strontium, Total	580	0.036	0.20	ug/l	1	02/28/24	

Microbiological Parameters by Standard Methods

4B12117

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Sample Results

(Continued)

Sample: AT-GS-1-54

Sampled: 02/12/24 12:15 by Windsor Lee

4B12117-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods (Continued)							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B0984		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/12/24 17:26		Analyst: rea	
Heterotrophic Plate Count	370	2.0	2.0	MPN/mL	1	02/14/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B0981		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/12/24 20:01		Analyst: slh	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/14/24	

Sample Results

(Continued)

Sample: AT-GS-1-54

Sampled: 02/12/24 12:15 by Windsor Lee

4B12117-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1108		Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM	
Sulfate as SO4	220	0.72	1.5	mg/l	3	02/14/24	M-05

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Sample Results

(Continued)

Sample: AT-GS-1-57

Sampled: 02/12/24 12:10 by Windsor Lee

4B12117-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.28	0.0090	0.10	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.6			AGI	1	03/13/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B0991	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 09:39		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/13/24 10:19	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0090	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 15:58		Analyst: YMT		
Ammonia as N	0.34	0.017	0.10	mg/l	1	03/04/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	0.38	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1076	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 16:55		Analyst: ISM		
Nitrate as N	0.46	0.040	0.20	mg/l	1	02/13/24 20:23	
Nitrite as N	ND	42	100	ug/l	1	02/13/24 20:23	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO ₄ , Total	0.17	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1028	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 12:23		Analyst: hhl		
Color	ND		3.0	Color Units	1	02/13/24 13:27	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1064	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 15:58		Analyst: mes		
Alkalinity as CaCO ₃	340	7.2	20	mg/l	1	02/14/24	
Bicarbonate Alkalinity as HCO ₃	410	8.8	24	mg/l	1	02/14/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/14/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/14/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0551	Preparation: _NONE (METALS)		Prepared: 03/07/24 11:21		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	66.2	-100	-100	N/A	1	03/07/24	A-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Sample Results

(Continued)

Sample: AT-GS-1-57

Sampled: 02/12/24 12:10 by Windsor Lee

4B12117-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59			Analyst: kjo	
Langelier Index @ 20 C	0.613	-20.0	-10.0	LSI	1	03/07/24	
Langelier Index @ 60 C	1.12	-20.0	-10.0	LSI	1	03/07/24	
Method: SM 2540C			Instr: OVEN17				
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 18:39			Analyst: bel	
Total Dissolved Solids	1000	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+-B			Instr: AA02				
Batch ID: W4B0996	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 09:44			Analyst: mes	
pH	7.48	0.10	0.10	pH Units	1	02/13/24 10:25	*

Metals by EPA 200 Series Methods

Method: [CALC]			Instr: [CALC]				
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/26/24 11:37			Analyst: kvm	
Hardness as CaCO3, Total	600	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7			Instr: ICP03				
Batch ID: W4B2096	Preparation: EPA 200.2		Prepared: 02/26/24 11:37			Analyst: kvm	
Boron, Total	200	1.3	10	ug/l	1	02/28/24	
Calcium, Total	142	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	59.7	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	39	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2097	Preparation: EPA 200.2		Prepared: 02/26/24 16:39			Analyst: tyc	
Aluminum, Total	ND	4.4	20	ug/l	1	02/28/24	
Arsenic, Total	0.65	0.074	0.40	ug/l	1	02/28/24	
Barium, Total	52	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	1.9	0.23	0.50	ug/l	1	02/28/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	4.8	3.9	20	ug/l	1	02/28/24	J
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	0.11	0.11	1.0	ug/l	1	02/28/24	J
Manganese, Total	0.32	0.23	1.0	ug/l	1	02/28/24	J
Potassium, Total	3.1	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	1.2	0.067	0.40	ug/l	1	02/28/24	
Sodium, Total	93	0.10	1.0	mg/l	1	02/28/24	
Strontium, Total	810	0.036	0.20	ug/l	1	02/28/24	

Microbiological Parameters by Standard Methods

4B12117

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Sample Results

(Continued)

Sample: AT-GS-1-57

Sampled: 02/12/24 12:10 by Windsor Lee

4B12117-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods (Continued)							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B0984		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/12/24 17:26		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/14/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B0981		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/12/24 20:01		Analyst: slh	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/14/24	

Sample Results

(Continued)

Sample: AT-GS-1-57

Sampled: 02/12/24 12:10 by Windsor Lee

4B12117-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1108		Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM	
Sulfate as SO4	320	0.96	2.0	mg/l	4	02/15/24	M-05

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Sample Results

(Continued)

Sample: AT-RES-1-522

Sampled: 02/12/24 13:30 by Windsor Lee

4B12117-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	35	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.75	0.0090	0.10	mg/l	1	02/14/24	
Sulfate as SO4	74	0.24	0.50	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/13/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B0991	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 09:39		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/13/24 10:19	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0090	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 15:58		Analyst: YMT		
Ammonia as N	0.77	0.017	0.10	mg/l	1	03/04/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	0.65	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1076	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 16:55		Analyst: ISM		
Nitrate as N	0.50	0.040	0.20	mg/l	1	02/13/24 20:24	
Nitrite as N	ND	42	100	ug/l	1	02/13/24 20:24	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO4, Total	0.056	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1028	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 12:23		Analyst: hhl		
Color	ND		3.0	Color Units	1	02/13/24 13:27	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1064	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 15:58		Analyst: mes		
Alkalinity as CaCO3	97	7.2	20	mg/l	1	02/14/24	
Bicarbonate Alkalinity as HCO3	92	8.8	24	mg/l	1	02/14/24	
Carbonate Alkalinity as CaCO3	21	7.2	20	mg/l	1	02/14/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/14/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0551	Preparation: _NONE (METALS)		Prepared: 03/07/24 11:21		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	3.65	-100	-100	N/A	1	03/07/24	A-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Sample Results

(Continued)

Sample: AT-RES-1-522

Sampled: 02/12/24 13:30 by Windsor Lee

4B12117-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0551	Preparation: _NONE (METALS)			Instr: [CALC]		Prepared: 03/07/24 11:21	Analyst: aln
Method: SM 2330B							
Batch ID: W4C0581	Preparation: _NONE (METALS)			Instr: [CALC]		Prepared: 03/07/24 13:59	Analyst: kjo
Langelier Index @ 20 C	0.345	-20.0	-10.0	LSI	1	03/07/24	
Langelier Index @ 60 C	0.862	-20.0	-10.0	LSI	1	03/07/24	
Method: SM 2540C							
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)			Instr: OVEN17		Prepared: 02/14/24 18:39	Analyst: bel
Total Dissolved Solids	240	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+-B							
Batch ID: W4B0996	Preparation: _NONE (WETCHEM)			Instr: AA02		Prepared: 02/13/24 09:44	Analyst: mes
pH	8.26	0.10	0.10	pH Units	1	02/13/24 10:28	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]			Instr: [CALC]		Prepared: 02/26/24 11:37	Analyst: kvm
Hardness as CaCO3, Total	133	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2096	Preparation: EPA 200.2			Instr: ICP03		Prepared: 02/26/24 11:37	Analyst: kvm
Boron, Total	130	1.3	10	ug/l	1	02/28/24	
Calcium, Total	31.7	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	13.2	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	9.2	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	9.4	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2097	Preparation: EPA 200.2			Instr: ICPMS06		Prepared: 02/26/24 16:39	Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/28/24	
Arsenic, Total	0.30	0.074	0.40	ug/l	1	02/28/24	J
Barium, Total	12	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	1.4	0.23	0.50	ug/l	1	02/28/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	5.4	3.9	20	ug/l	1	02/28/24	J
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/28/24	
Manganese, Total	0.33	0.23	1.0	ug/l	1	02/28/24	J
Potassium, Total	0.84	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	0.44	0.067	0.40	ug/l	1	02/28/24	
Sodium, Total	35	0.10	1.0	mg/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Sample Results

(Continued)

Sample: AT-RES-1-522

Sampled: 02/12/24 13:30 by Windsor Lee

4B12117-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Strontium, Total	160	0.036	0.20	ug/l	1	02/28/24	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B0984		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/12/24 17:26		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/14/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B0981		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/12/24 20:01		Analyst: slh	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/14/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Sample Results BSK Associates Laboratory Fresno

Sample: AT-GS-1-54
 4B12117-01 (Water)

Sampled: 02/12/24 12:15 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/05/24	HT1.0
Chlorate	93		5.0	ug/L	1	03/05/24	
<i>Surrogate(s)</i>							
Dichloroacetate	95%		90-115			03/05/24	HT1.0
Dichloroacetate	95%		90-115			03/05/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/07/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.63		0.010	mg/L	1	03/02/24	

Sample: AT-GS-1-57
 4B12117-02 (Water)

Sampled: 02/12/24 12:10 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	220		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	98%		90-115			03/06/24	HT1.0
Dichloroacetate	98%		90-115			03/06/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/07/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.89		0.010	mg/L	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Sample Results BSK Associates Laboratory Fresno (Continued)

Sample: AT-RES-1-522 Sampled: 02/12/24 13:30 by Windsor Lee
 4B12117-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0219		Prepared: 03/05/24 23:17		Analyst: DXR		
Chlorite	ND		0.0050	mg/L	1	03/05/24	HT1.0
Chlorate	280		5.0	ug/L	1	03/05/24	
<i>Surrogate(s)</i>							
Dichloroacetate	95%		90-115			03/05/24	HT1.0
Dichloroacetate	95%		90-115			03/05/24	
Method: EPA 317.0	Batch ID: AHC0135		Prepared: 03/07/24 20:03		Analyst: DXR		
Bromate	ND		1.0	ug/L	1	03/07/24	
General Chemistry							
Method: EPA 300.0	Batch ID: AHC0061		Prepared: 03/01/24 16:22		Analyst: AAS		
Bromide	0.66		0.010	mg/L	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0135 - EPA 317.0										
Blank (AHC0135-BLK1) Prepared & Analyzed: 03/07/24										
Bromate	ND	1.0	ug/L							
LCS (AHC0135-BS1) Prepared & Analyzed: 03/07/24										
Bromate	9.8	1.0	ug/L	10.0		98	85-115			
LCS Dup (AHC0135-BSD1) Prepared & Analyzed: 03/07/24										
Bromate	9.9	1.0	ug/L	10.0		99	85-115	1	10	
Matrix Spike (AHC0135-MS1) Source: AHB3420-02 Prepared & Analyzed: 03/07/24										
Bromate	9.5	1.0	ug/L	10.0	ND	95	75-125			
Matrix Spike Dup (AHC0135-MSD1) Source: AHB3420-02 Prepared & Analyzed: 03/07/24										
Bromate	9.7	1.0	ug/L	10.0	ND	97	75-125	2	10	
Batch: AHC0219 - EPA 300.1										
Blank (AHC0219-BLK1) Prepared & Analyzed: 03/05/24										
Chlorate	ND	5.0	ug/L							
Chlorite	ND	0.0050	mg/L							
<i>Surrogate(s)</i>										
Dichloroacetate	0.508		mg/L	0.500		102	90-115			
Dichloroacetate	508		ug/L	500		102	90-115			
LCS (AHC0219-BS1) Prepared & Analyzed: 03/05/24										
Chlorate	200	5.0	ug/L	200		100	85-115			
Chlorite	0.21	0.0050	mg/L	0.200		105	85-115			
<i>Surrogate(s)</i>										
Dichloroacetate	0.512		mg/L	0.500		102	90-115			
Dichloroacetate	512		ug/L	500		102	90-115			
LCS Dup (AHC0219-BSD1) Prepared & Analyzed: 03/05/24										
Chlorate	200	5.0	ug/L	200		100	85-115	0.1	10	
Chlorite	0.21	0.0050	mg/L	0.200		103	85-115	2	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.525		mg/L	0.500		105	90-115			
Dichloroacetate	525		ug/L	500		105	90-115			
Matrix Spike (AHC0219-MS1) Source: AHB3420-01 Prepared & Analyzed: 03/05/24										
Chlorate	100	5.0	ug/L	100	ND	104	75-125			
Chlorite	0.10	0.0050	mg/L	0.100	ND	104	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.549		mg/L	0.500		110	90-115			
Dichloroacetate	549		ug/L	500		110	90-115			
Matrix Spike (AHC0219-MS2) Source: AHC0050-01 Prepared & Analyzed: 03/06/24										
Chlorate	100	5.0	ug/L	100	ND	105	75-125			
Chlorite	0.097	0.0050	mg/L	0.100	ND	97	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.521		mg/L	0.500		104	90-115			
Dichloroacetate	521		ug/L	500		104	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0219 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0219-MSD1)			Source: AHB3420-01		Prepared & Analyzed: 03/05/24					
Chlorate	99	5.0	ug/L	100	ND	99	75-125	5	10	
Chlorite	0.10	0.0050	mg/L	0.100	ND	105	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.555		mg/L	0.500		111	90-115			
Dichloroacetate	555		ug/L	500		111	90-115			
Matrix Spike Dup (AHC0219-MSD2)			Source: AHC0050-01		Prepared & Analyzed: 03/06/24					
Chlorate	100	5.0	ug/L	100	ND	104	75-125	0.9	10	
Chlorite	0.096	0.0050	mg/L	0.100	ND	96	75-125	1	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.509		mg/L	0.500		102	90-115			
Dichloroacetate	509		ug/L	500		102	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0061 - EPA 300.0										
Blank (AHC0061-BLK1)			Prepared & Analyzed: 03/01/24							
Bromide	ND	0.010	mg/L							
LCS (AHC0061-BS1)			Prepared: 03/01/24 Analyzed: 03/02/24							
Bromide	0.19	0.010	mg/L	0.200		93	90-110			
Matrix Spike (AHC0061-MS1)			Source: AHC0047-02		Prepared: 03/01/24 Analyzed: 03/02/24					
Bromide	0.28	0.010	mg/L	0.100	0.20	74	80-120			MS1.0
Matrix Spike Dup (AHC0061-MSD1)			Source: AHC0047-02		Prepared: 03/01/24 Analyzed: 03/02/24					
Bromide	0.28	0.010	mg/L	0.100	0.20	76	80-120	0.7	10	MS1.0

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1108 - EPA 300.0											
Blank (W4B1108-BLK1)					Prepared & Analyzed: 02/14/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1108-BS1)					Prepared & Analyzed: 02/14/24						
Chloride, Total	20.1	0.19	0.50	mg/l	20.0		100	90-110			
Fluoride, Total	1.92	0.0090	0.10	mg/l	2.00		96	90-110			
Sulfate as SO4	19.8	0.24	0.50	mg/l	20.0		99	90-110			
Matrix Spike (W4B1108-MS1)					Source: 4B13114-01 Prepared & Analyzed: 02/14/24						
Chloride, Total	264	1.9	5.0	mg/l	200	52.5	106	76-118			
Fluoride, Total	20.0	0.090	1.0	mg/l	20.0	0.266	99	90-107			
Sulfate as SO4	263	2.4	5.0	mg/l	200	54.0	105	84-111			
Matrix Spike (W4B1108-MS2)					Source: 4B13114-02 Prepared & Analyzed: 02/14/24						
Chloride, Total	275	1.9	5.0	mg/l	200	60.8	107	76-118			
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.265	100	90-107			
Sulfate as SO4	262	2.4	5.0	mg/l	200	50.4	106	84-111			
Matrix Spike Dup (W4B1108-MSD1)					Source: 4B13114-01 Prepared & Analyzed: 02/14/24						
Chloride, Total	265	1.9	5.0	mg/l	200	52.5	106	76-118	0.2	20	
Fluoride, Total	20.1	0.090	1.0	mg/l	20.0	0.266	99	90-107	0.5	10	
Sulfate as SO4	264	2.4	5.0	mg/l	200	54.0	105	84-111	0.3	20	
Matrix Spike Dup (W4B1108-MSD2)					Source: 4B13114-02 Prepared & Analyzed: 02/14/24						
Chloride, Total	275	1.9	5.0	mg/l	200	60.8	107	76-118	0.2	20	
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.265	100	90-107	0	10	
Sulfate as SO4	261	2.4	5.0	mg/l	200	50.4	105	84-111	0.2	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B0991 - EPA 140.1										
Blank (W4B0991-BLK1) Prepared & Analyzed: 02/13/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B0991-DUP1) Source: 4B12117-01 Prepared & Analyzed: 02/13/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B0996 - SM 4500H+-B										
LCS (W4B0996-BS1) Prepared & Analyzed: 02/13/24										
pH	6.93	0.10	0.10	pH Units	6.86		101 98.8-101			
Duplicate (W4B0996-DUP1) Source: 4B12117-01 Prepared & Analyzed: 02/13/24										
pH	7.06	0.10	0.10	pH Units		6.96		1	3.1	
Batch: W4B1028 - SM 2120B										
LCS (W4B1028-BS1) Prepared & Analyzed: 02/13/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1028-DUP1) Source: 4B12117-02 Prepared & Analyzed: 02/13/24										
Color	ND		3.0	Color Units		ND			10	
Duplicate (W4B1028-DUP2) Source: 4B12117-03 Prepared & Analyzed: 02/13/24										
Color	ND		3.0	Color Units		ND			10	
Batch: W4B1064 - SM 2320B										
Blank (W4B1064-BLK1) Prepared: 02/13/24 Analyzed: 02/14/24										
Alkalinity as CaCO ₃	ND	7.2	20	mg/l						
Bicarbonate Alkalinity as HCO ₃	ND	8.8	24	mg/l						
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l						
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l						
LCS (W4B1064-BS1) Prepared: 02/13/24 Analyzed: 02/14/24										
Alkalinity as CaCO ₃	85.4	7.2	20	mg/l	87.8		97 94-108			
Bicarbonate Alkalinity as HCO ₃	104	8.8	24	mg/l	107		97 95-108			
Duplicate (W4B1064-DUP1) Source: 3L15016-01 Prepared: 02/13/24 Analyzed: 02/14/24										
Alkalinity as CaCO ₃	158	7.2	20	mg/l		137		14	15	
Bicarbonate Alkalinity as HCO ₃	193	8.8	24	mg/l		168		14	15	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l		ND			200	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l		ND			200	
Batch: W4B1076 - EPA 353.2										
Blank (W4B1076-BLK1) Prepared & Analyzed: 02/13/24										
Nitrate as N	ND	0.040	0.15	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B1076-BS1) Prepared & Analyzed: 02/13/24										
Nitrate as N	1.01	0.040	0.15	mg/l	1.00		101 90-110			
Nitrite as N	954	42	100	ug/l	1000		95 90-110			
Matrix Spike (W4B1076-MS1) Source: 4B05004-07 Prepared & Analyzed: 02/13/24										

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1076 - EPA 353.2 (Continued)											
Matrix Spike (W4B1076-MS1)			Source: 4B05004-07			Prepared & Analyzed: 02/13/24					
Nitrate as N	6.38	0.040	0.15	mg/l	2.00	4.35	102	90-110			
Nitrite as N	998	42	100	ug/l	1000	ND	100	90-110			
Matrix Spike (W4B1076-MS2)			Source: 4B12051-21			Prepared & Analyzed: 02/13/24					
Nitrate as N	9.35	0.040	0.15	mg/l	2.00	7.34	100	90-110			
Nitrite as N	1030	42	100	ug/l	1000	ND	103	90-110			
Matrix Spike Dup (W4B1076-MSD1)			Source: 4B05004-07			Prepared & Analyzed: 02/13/24					
Nitrate as N	6.36	0.040	0.15	mg/l	2.00	4.35	100	90-110	0.3	20	
Nitrite as N	969	42	100	ug/l	1000	ND	97	90-110	3	20	
Matrix Spike Dup (W4B1076-MSD2)			Source: 4B12051-21			Prepared & Analyzed: 02/13/24					
Nitrate as N	9.36	0.040	0.15	mg/l	2.00	7.34	101	90-110	0.1	20	
Nitrite as N	1030	42	100	ug/l	1000	ND	103	90-110	0	20	
Batch: W4B1233 - SM 2540C											
Blank (W4B1233-BLK1)						Prepared: 02/14/24 Analyzed: 02/15/24					
Total Dissolved Solids	ND	4.0	10	mg/l							
LCS (W4B1233-BS1)						Prepared: 02/14/24 Analyzed: 02/15/24					
Total Dissolved Solids	801	4.0	10	mg/l	824		97	97-103			
Duplicate (W4B1233-DUP1)			Source: 4B12018-01			Prepared: 02/14/24 Analyzed: 02/15/24					
Total Dissolved Solids	1760	4.0	10	mg/l		1700			3	10	
Duplicate (W4B1233-DUP2)			Source: 4B12018-02			Prepared: 02/14/24 Analyzed: 02/15/24					
Total Dissolved Solids	1390	4.0	10	mg/l		1410			2	10	
Batch: W4B2385 - EPA 365.3											
Blank (W4B2385-BLK1)						Prepared: 02/28/24 Analyzed: 03/04/24					
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W4B2385-BS1)						Prepared: 02/28/24 Analyzed: 03/04/24					
Phosphorus as PO4, Total	0.596	0.021	0.030	mg/l	0.612		97	90-110			
Matrix Spike (W4B2385-MS1)			Source: 4B06187-07			Prepared: 02/28/24 Analyzed: 03/04/24					
Phosphorus as PO4, Total	0.711	0.021	0.030	mg/l	0.612	0.124	96	90-110			
Matrix Spike Dup (W4B2385-MSD1)			Source: 4B06187-07			Prepared: 02/28/24 Analyzed: 03/04/24					
Phosphorus as PO4, Total	0.730	0.021	0.030	mg/l	0.612	0.124	99	90-110	3	20	
Batch: W4C0062 - EPA 351.2											
Blank (W4C0062-BLK1)						Prepared: 03/01/24 Analyzed: 03/05/24					
TKN	ND	0.065	0.10	mg/l							
Blank (W4C0062-BLK2)						Prepared: 03/01/24 Analyzed: 03/05/24					
TKN	ND	0.065	0.10	mg/l							
LCS (W4C0062-BS1)						Prepared: 03/01/24 Analyzed: 03/05/24					
TKN	0.939	0.065	0.10	mg/l	1.00		94	90-110			
LCS (W4C0062-BS2)						Prepared: 03/01/24 Analyzed: 03/05/24					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Quality Control Results (Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4C0062 - EPA 351.2 (Continued)											
LCS (W4C0062-BS2)											
TKN	0.918	0.065	0.10	mg/l	1.00		92	90-110			
Matrix Spike (W4C0062-MS1)											
TKN	3.04	0.13	0.20	mg/l	2.00	1.19	93	90-110			
Matrix Spike (W4C0062-MS2)											
TKN	1.72	0.065	0.10	mg/l	1.00	0.750	97	90-110			
Matrix Spike Dup (W4C0062-MSD1)											
TKN	3.09	0.13	0.20	mg/l	2.00	1.19	95	90-110	1	10	
Matrix Spike Dup (W4C0062-MSD2)											
TKN	1.71	0.065	0.10	mg/l	1.00	0.750	96	90-110	0.6	10	
Batch: W4C0090 - EPA 350.1											
Blank (W4C0090-BLK1)											
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W4C0090-BS1)											
Ammonia as N	0.249	0.017	0.10	mg/l	0.250		100	90-110			
Matrix Spike (W4C0090-MS1)											
Ammonia as N	0.272	0.017	0.10	mg/l	0.250	0.0229	100	90-110			
Matrix Spike Dup (W4C0090-MSD1)											
Ammonia as N	0.274	0.017	0.10	mg/l	0.250	0.0229	101	90-110	0.8	15	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:47

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier	
Batch: W4B2096 - EPA 200.7										
Blank (W4B2096-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	ND	1.3	10	ug/l						
Calcium, Total	ND	0.0240	0.500	mg/l						
Magnesium, Total	ND	0.0148	0.500	mg/l						
Silica as SiO ₂ , Dissolved	ND	0.0086	0.10	mg/l						
Silica as SiO ₂ , Total	ND	0.0086	0.10	mg/l						
LCS (W4B2096-BS1)					Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	225	1.3	10	ug/l	200	112	85-115			
Calcium, Total	47.9	0.0240	0.500	mg/l	50.2	96	85-115			
Magnesium, Total	48.1	0.0148	0.500	mg/l	50.2	96	85-115			
Silica as SiO ₂ , Dissolved	43.7	0.0086	0.10	mg/l	43.2	101	85-115			
Silica as SiO ₂ , Total	43.7	0.0086	0.10	mg/l	43.2	101	85-115			
Matrix Spike (W4B2096-MS1)					Source: 4B12117-01 Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	366	1.3	10	ug/l	200	139	114	70-130		
Calcium, Total	155	0.0240	0.500	mg/l	50.2	110	89	70-130		
Magnesium, Total	98.7	0.0148	0.500	mg/l	50.2	51.7	94	70-130		
Silica as SiO ₂ , Dissolved	81.1	0.0086	0.10	mg/l	43.2	38.3	99	70-130		
Silica as SiO ₂ , Total	81.1	0.0086	0.10	mg/l	43.2	38.1	100	70-130		
Matrix Spike (W4B2096-MS2)					Source: 4B13138-01 Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	376	1.3	10	ug/l	200	138	119	70-130		
Calcium, Total	159	0.0240	0.500	mg/l	50.2	111	95	70-130		
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.3	98	70-130		
Silica as SiO ₂ , Dissolved	83.2	0.0086	0.10	mg/l	43.2	36.7	108	70-130		
Silica as SiO ₂ , Total	83.2	0.0086	0.10	mg/l	43.2	37.5	106	70-130		
Matrix Spike Dup (W4B2096-MSD1)					Source: 4B12117-01 Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	373	1.3	10	ug/l	200	139	117	70-130	2 30	
Calcium, Total	157	0.0240	0.500	mg/l	50.2	110	94	70-130	2 30	
Magnesium, Total	100	0.0148	0.500	mg/l	50.2	51.7	97	70-130	2 30	
Silica as SiO ₂ , Dissolved	83.3	0.0086	0.10	mg/l	43.2	38.3	104	70-130	3 30	
Silica as SiO ₂ , Total	83.3	0.0086	0.10	mg/l	43.2	38.1	105	70-130	3 30	
Matrix Spike Dup (W4B2096-MSD2)					Source: 4B13138-01 Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	375	1.3	10	ug/l	200	138	118	70-130	0.2 30	
Calcium, Total	159	0.0240	0.500	mg/l	50.2	111	95	70-130	0.1 30	
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.3	97	70-130	0.2 30	
Silica as SiO ₂ , Dissolved	83.2	0.0086	0.10	mg/l	43.2	36.7	108	70-130	0.06 30	
Silica as SiO ₂ , Total	83.2	0.0086	0.10	mg/l	43.2	37.5	106	70-130	0.06 30	
Batch: W4B2097 - EPA 200.8										
Blank (W4B2097-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24					
Aluminum, Total	ND	4.4	20	ug/l						

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Blank (W4B2097-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24						
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W4B2097-BS1)											
					Prepared: 02/26/24 Analyzed: 02/28/24						
Aluminum, Total	48.0	4.4	20	ug/l	50.0		96	85-115			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	48.5	0.14	1.0	ug/l	50.0		97	85-115			
Copper, Total	53.2	0.23	0.50	ug/l	50.0		106	85-115			
Iron, Dissolved	1210	3.9	20	ug/l	1050		115	85-115			
Iron, Total	1210	3.9	20	ug/l	1050		115	85-115			
Lead, Total	50.3	0.083	0.20	ug/l	50.0		101	85-115			
Manganese, Dissolved	52.3	0.11	1.0	ug/l	50.0		105	85-115			
Manganese, Total	52.3	0.23	1.0	ug/l	50.0		105	85-115			
Potassium, Total	2.11	0.068	0.50	mg/l	2.05		103	85-115			
Selenium, Total	50.5	0.067	0.40	ug/l	50.0		101	85-115			
Sodium, Total	2.18	0.10	1.0	mg/l	2.05		106	85-115			
Strontium, Total	48.2	0.036	0.20	ug/l	50.0		96	85-115			
Matrix Spike (W4B2097-MS1)											
					Prepared: 02/26/24 Analyzed: 02/28/24						
Aluminum, Total	46.9	4.4	20	ug/l	50.0	ND	94	70-130			
Arsenic, Total	51.5	0.074	0.40	ug/l	50.0	0.653	102	70-130			
Barium, Total	103	0.14	1.0	ug/l	50.0	52.3	102	70-130			
Copper, Total	51.4	0.23	0.50	ug/l	50.0	1.93	99	70-130			
Iron, Dissolved	1130	3.9	20	ug/l	1050	ND	108	70-130			
Iron, Total	1130	3.9	20	ug/l	1050	4.77	107	70-130			
Lead, Total	50.7	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	50.3	0.11	1.0	ug/l	50.0	0.114	100	70-130			
Manganese, Total	50.3	0.23	1.0	ug/l	50.0	0.320	100	70-130			
Potassium, Total	5.10	0.068	0.50	mg/l	2.05	3.10	98	70-130			
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	1.24	97	70-130			
Sodium, Total	94.0	0.10	1.0	mg/l	2.05	93.0	48	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Matrix Spike (W4B2097-MS1) Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24											
Strontium, Total	845	0.036	0.20	ug/l	50.0	808	74	70-130			
Matrix Spike (W4B2097-MS2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	47.9	4.4	20	ug/l	50.0	ND	96	70-130			
Arsenic, Total	50.1	0.074	0.40	ug/l	50.0	0.283	100	70-130			
Barium, Total	59.6	0.14	1.0	ug/l	50.0	10.2	99	70-130			
Copper, Total	50.8	0.23	0.50	ug/l	50.0	ND	101	70-130			
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130			
Iron, Total	1140	3.9	20	ug/l	1050	ND	109	70-130			
Lead, Total	49.6	0.083	0.20	ug/l	50.0	ND	99	70-130			
Manganese, Dissolved	50.6	0.11	1.0	ug/l	50.0	ND	101	70-130			
Manganese, Total	50.6	0.23	1.0	ug/l	50.0	ND	101	70-130			
Potassium, Total	2.76	0.068	0.50	mg/l	2.05	0.772	97	70-130			
Selenium, Total	48.4	0.067	0.40	ug/l	50.0	0.399	96	70-130			
Sodium, Total	33.3	0.10	1.0	mg/l	2.05	33.8	NR	70-130			MS-02
Strontium, Total	191	0.036	0.20	ug/l	50.0	147	89	70-130			
Matrix Spike Dup (W4B2097-MSD1) Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	47.9	4.4	20	ug/l	50.0	ND	96	70-130	2	30	
Arsenic, Total	51.6	0.074	0.40	ug/l	50.0	0.653	102	70-130	0.09	30	
Barium, Total	104	0.14	1.0	ug/l	50.0	52.3	103	70-130	0.6	30	
Copper, Total	51.6	0.23	0.50	ug/l	50.0	1.93	99	70-130	0.4	30	
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130	1	30	
Iron, Total	1140	3.9	20	ug/l	1050	4.77	109	70-130	1	30	
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101	70-130	0.3	30	
Manganese, Dissolved	50.0	0.11	1.0	ug/l	50.0	0.114	100	70-130	0.5	30	
Manganese, Total	50.0	0.23	1.0	ug/l	50.0	0.320	99	70-130	0.5	30	
Potassium, Total	5.12	0.068	0.50	mg/l	2.05	3.10	99	70-130	0.3	30	
Selenium, Total	50.3	0.067	0.40	ug/l	50.0	1.24	98	70-130	1	30	
Sodium, Total	94.6	0.10	1.0	mg/l	2.05	93.0	77	70-130	0.7	30	
Strontium, Total	860	0.036	0.20	ug/l	50.0	808	103	70-130	2	30	
Matrix Spike Dup (W4B2097-MSD2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	48.4	4.4	20	ug/l	50.0	ND	97	70-130	1	30	
Arsenic, Total	50.2	0.074	0.40	ug/l	50.0	0.283	100	70-130	0.3	30	
Barium, Total	59.8	0.14	1.0	ug/l	50.0	10.2	99	70-130	0.2	30	
Copper, Total	51.8	0.23	0.50	ug/l	50.0	ND	104	70-130	2	30	
Iron, Dissolved	1150	3.9	20	ug/l	1050	ND	109	70-130	0.4	30	
Iron, Total	1150	3.9	20	ug/l	1050	ND	109	70-130	0.4	30	
Lead, Total	50.0	0.083	0.20	ug/l	50.0	ND	100	70-130	0.9	30	
Manganese, Dissolved	51.7	0.11	1.0	ug/l	50.0	ND	103	70-130	2	30	
Manganese, Total	51.7	0.23	1.0	ug/l	50.0	ND	103	70-130	2	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B2097-MSD2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Potassium, Total	2.82	0.068	0.50	mg/l	2.05	0.772	100	70-130	2	30	
Selenium, Total	48.7	0.067	0.40	ug/l	50.0	0.399	97	70-130	0.7	30	
Sodium, Total	34.9	0.10	1.0	mg/l	2.05	33.8	53	70-130	5	30	MS-02
Strontium, Total	193	0.036	0.20	ug/l	50.0	147	92	70-130	0.8	30	

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0981 - SM 9221B											
Blank (W4B0981-BLK1) Prepared: 02/12/24 Analyzed: 02/14/24											
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:47

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	No source temperature provided, default at 20C
HT1.0	Holding time exceeded. Sample was received at the lab past holding time.
J	Estimated conc. detected <MRL and >MDL.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B12118

Report Date: 4/04/2024

Received Date: 2/12/2024

Project: City of Santa Monica - 97-005 090123

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

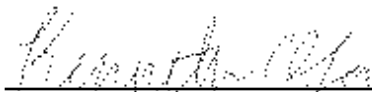
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/12/24 with the Chain-of-Custody document. The samples were received in good condition, at 3.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-1-S22	Windsor Lee	4B12118-01	Water	02/12/24 13:30	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 1613B in Water				
2,3,7,8-TCDD (Dioxin)	1746-01-6		⊗	
EPA 508.1 in Water				
Aldrin	309-00-2	⊗		⊗
alpha-BHC	319-84-6	⊗		⊗
beta-BHC	319-85-7	⊗		⊗
delta-BHC	319-86-8	⊗		⊗
gamma-BHC (Lindane)	58-89-9			⊗
4,4'-DDD	72-54-8	⊗		⊗
4,4'-DDE	72-55-9	⊗		⊗
4,4'-DDT	50-29-3	⊗		⊗
Dieldrin	60-57-1	⊗		⊗
Endosulfan I	959-98-8	⊗		⊗
Endosulfan II	33213-65-9	⊗		⊗
Endosulfan sulfate	1031-07-8	⊗		⊗
Endrin aldehyde	7421-93-4	⊗		⊗
Chlorothalonil	1897-45-6	⊗	⊗	⊗
Trifluralin	1582-09-8	⊗		⊗
Toxaphene	8001-35-2			⊗
PCBs, Total				⊗
EPA 515.4 in Water				
3,5-Dichlorobenzoic acid	51-36-5	⊗		⊗
Dichloroprop	120-36-5	⊗		⊗
2,4,5-T	93-76-5	⊗		⊗
2,4-DB	94-82-6	⊗		⊗
DCPA	1861-32-1	⊗		⊗
Acifluorfen	50594-66-6	⊗		⊗
Chloramben	133-90-4	⊗	⊗	⊗
EPA 525.2 in Water				
Bromacil	314-40-9	⊗		⊗
Captan	133-06-2	⊗	⊗	⊗
Chlorpropham	101-21-3	⊗		⊗
Diazinon	333-41-5	⊗		⊗
Dimethoate	60-51-5	⊗	⊗	⊗
Diphenamid	957-51-7	⊗		⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 525.2 in Water (Continued)				
Disulfoton	298-04-4	⊗		⊗
EPTC	759-94-4	⊗		⊗
Metolachlor	51218-45-2	⊗		⊗
Metribuzin	21087-64-9	⊗		⊗
Prometryn	7287-19-6	⊗		⊗
Terbacil	5902-51-2	⊗		⊗
Trithion	786-19-6	⊗	⊗	⊗
EPA 531.2 in Water				
Propoxur (Baygon)	114-26-1	⊗		⊗
Methiocarb	2032-65-7	⊗		⊗
EPA 900.0 in Water				
Gross Beta			⊗	
SM 7110C in Water				
Gross Alpha			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12118-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Carbamates and Urea Pesticides							
Method: EPA 531.2				Instr: LC11			
Batch ID: W4B2044		Preparation: _NONE (LC)		Prepared: 02/25/24 10:29		Analyst: cam	
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l	1	02/25/24	
Aldicarb	ND	0.58	2.0	ug/l	1	02/25/24	
Aldicarb sulfone	ND	0.73	2.0	ug/l	1	02/25/24	
Aldicarb sulfoxide	ND	1.0	2.0	ug/l	1	02/25/24	
Carbaryl	ND	1.0	2.0	ug/l	1	02/25/24	
Carbofuran	ND	1.0	2.0	ug/l	1	02/25/24	
Methiocarb	ND	1.0	2.0	ug/l	1	02/25/24	
Methomyl	ND	1.3	2.0	ug/l	1	02/25/24	
Oxamyl	ND	1.1	2.0	ug/l	1	02/25/24	
Propoxur (Baygon)	ND	1.4	2.0	ug/l	1	02/25/24	
<i>Surrogate(s)</i>							
BDMC	111%	Conc: 11.1	70-130			02/25/24	

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.4				Instr: GC08			
Batch ID: W4B1069		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/14/24 08:21		Analyst: alf	
2,4,5-T	ND	0.065	0.20	ug/l	1	02/24/24	
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l	1	02/24/24	
2,4-D	ND	0.14	0.40	ug/l	1	02/24/24	
2,4-DB	ND	0.19	2.0	ug/l	1	02/24/24	
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l	1	02/24/24	
Acifluorfen	ND	0.030	0.40	ug/l	1	02/24/24	
Bentazon	ND	0.23	2.0	ug/l	1	02/24/24	
Dalapon	ND	0.11	0.40	ug/l	1	02/24/24	
DCPA	ND	0.029	0.10	ug/l	1	02/24/24	
Dicamba	ND	0.15	0.60	ug/l	1	02/24/24	
Dichloroprop	ND	0.12	0.30	ug/l	1	02/24/24	
Dinoseb	ND	0.033	0.40	ug/l	1	02/24/24	
Pentachlorophenol	ND	0.014	0.20	ug/l	1	02/24/24	
Picloram	ND	0.050	0.60	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
2,4-DCAA	61%	Conc: 6.10	70-130			02/24/24	S-04

Chlorinated Pesticides and/or PCBs by GC/ECD

Method: EPA 508.1				Instr: GC08			
Batch ID: W4B2065		Preparation: EPA 508.1/SPE		Prepared: 02/26/24 08:40		Analyst: alf	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	03/09/24	

4B12118

Page 4 of 27

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12118-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)							
Method: EPA 508.1			Instr: GC08				
Batch ID: W4B2065		Preparation: EPA 508.1/SPE		Prepared: 02/26/24 08:40		Analyst: alf	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	03/09/24	
4,4'-DDT	ND	0.0030	0.010	ug/l	1	03/09/24	
Aldrin	ND	0.0040	0.010	ug/l	1	03/09/24	BS-04
alpha-BHC	ND	0.0015	0.010	ug/l	1	03/09/24	
Aroclor 1016	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1221	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1232	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1242	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1248	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1254	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1260	ND	0.10	0.10	ug/l	1	03/09/24	
beta-BHC	ND	0.010	0.010	ug/l	1	03/09/24	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	03/09/24	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	03/09/24	
delta-BHC	ND	0.0030	0.010	ug/l	1	03/09/24	
Dieldrin	ND	0.0030	0.010	ug/l	1	03/09/24	
Endosulfan I	ND	0.0030	0.010	ug/l	1	03/09/24	
Endosulfan II	ND	0.0019	0.010	ug/l	1	03/09/24	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	03/09/24	
Endrin	ND	0.0030	0.010	ug/l	1	03/09/24	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	03/09/24	BS-04
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	03/09/24	
Heptachlor	ND	0.0031	0.010	ug/l	1	03/09/24	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	03/09/24	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	03/09/24	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	03/09/24	
Methoxychlor	ND	0.0030	0.010	ug/l	1	03/09/24	
PCBs, Total	ND	0.10	0.50	ug/l	1	03/09/24	
Propachlor	ND	0.045	0.20	ug/l	1	03/09/24	
Toxaphene	ND	0.37	1.0	ug/l	1	03/09/24	
Trifluralin	ND	0.0043	0.010	ug/l	1	03/09/24	

Surrogate(s)

4,4-Dibromobiphenyl 127% Conc: 0.123 70-130 03/09/24

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

4B12118

Page 5 of 27

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12118-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: EPA 335.4				Instr: AA01			
Batch ID: W4B1613	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 19:10		Analyst: kac		
Cyanide, Total	3.8	1.5	5.0	ug/l	1	02/24/24	J
Diquat and Paraquat by EPA 549.2							
Method: EPA 549.2				Instr: LC10			
Batch ID: W4B1161	Preparation: EPA 549.2/SPE		Prepared: 02/15/24 07:03		Analyst: cam		
Diquat	ND	1.2	4.0	ug/l	1	02/21/24	
Endothall By EPA 548.1							
Method: EPA 548.1				Instr: GCMS06			
Batch ID: W4B1095	Preparation: EPA 548.1/SPE		Prepared: 02/14/24 07:39		Analyst: rmr		
Endothall	ND	11	45	ug/l	1	02/22/24	
Glyphosate by EPA 547							
Method: EPA 547				Instr: LC11			
Batch ID: W4B0844	Preparation: _NONE (LC)		Prepared: 02/13/24 09:03		Analyst: cam		
Glyphosate	ND	1.8	5.0	ug/l	1	02/13/24	
Haloacetic Acids (HAAs) by GC/ECD							
Method: EPA 552.3				Instr: GC05			
Batch ID: W4B1492	Preparation: EPA 552.3/Micro Ext. Drtz		Prepared: 02/20/24 07:59		Analyst: ecs		
Dibromoacetic acid (dbaa)	0.77	0.28	1.0	ug/l	1	03/03/24	J
Dichloroacetic acid (dcaa)	0.55	0.29	1.0	ug/l	1	03/03/24	J
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l	1	03/03/24	
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l	1	03/03/24	
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l	1	03/03/24	
<i>Surrogate(s)</i>							
2-Bromobutyric acid	98%	Conc: 9.76	70-130			03/03/24	
Metals by EPA 200 Series Methods							
Method: EPA 245.1				Instr: HG03			
Batch ID: W4C0150	Preparation: EPA 245.1		Prepared: 03/04/24 11:07		Analyst: KVM		
Mercury, Total	ND	0.037	0.050	ug/l	1	03/07/24	
Perchlorate by EPA 314.0							
Method: EPA 314.0				Instr: LC08_Channel1			
Batch ID: W4B1575	Preparation: _NONE (LC)		Prepared: 02/20/24 14:02		Analyst: CLL		
Perchlorate	ND	0.26	1.0	ug/l	1	02/20/24	
Radiological Parameters by APHA/EPA Methods							
Method: EPA 900.0				Instr: RAD02			
Batch ID: W4B1067	Preparation: _NONE (RADIOCHEM)		Prepared: 02/13/24 16:09		Analyst: ela		
Gross Beta	0.830			pCi/L	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12118-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Radiological Parameters by APHA/EPA Methods (Continued)

Method: EPA 900.0 **Instr:** RAD02
Batch ID: W4B1067 **Preparation:** _NONE (RADIOCHEM) **Prepared:** 02/13/24 16:09 **Analyst:** ela
Counting Uncertainty: 0.691 **MDA:** 1.135

Method: SM 7110C **Instr:** RAD01
Batch ID: W4B1576 **Preparation:** _NONE (RADIOCHEM) **Prepared:** 02/20/24 14:05 **Analyst:** ela
Gross Alpha **1.05** pCi/L 1 02/24/24
Counting Uncertainty: 0.218 **MDA:** 0.054

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2 **Instr:** GCMS16
Batch ID: W4B2063 **Preparation:** EPA 525.2/SPE **Prepared:** 02/26/24 08:34 **Analyst:** rmr

Alachlor	ND	0.063	0.10	ug/l	1	03/23/24
Atrazine	ND	0.042	0.10	ug/l	1	03/23/24
Benzo (a) pyrene	ND	0.045	0.10	ug/l	1	03/23/24
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l	1	03/23/24
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l	1	03/23/24
Bromacil	ND	0.24	0.50	ug/l	1	03/23/24
Butachlor	ND	0.040	0.10	ug/l	1	03/23/24
Captan	ND	0.32	1.0	ug/l	1	03/23/24
Chlorpropham	ND	0.040	0.10	ug/l	1	03/23/24
Diazinon	ND	0.022	0.10	ug/l	1	03/23/24
Dimethoate	ND	0.041	0.20	ug/l	1	03/23/24
Diphenamid	ND	0.030	0.10	ug/l	1	03/23/24
Disulfoton	ND	0.11	0.20	ug/l	1	03/23/24
EPTC	ND	0.020	0.10	ug/l	1	03/23/24
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l	1	03/23/24
Metolachlor	ND	0.030	0.10	ug/l	1	03/23/24
Metribuzin	ND	0.030	0.10	ug/l	1	03/23/24
Molinate	ND	0.030	0.10	ug/l	1	03/23/24
Prometryn	ND	0.030	0.10	ug/l	1	03/23/24
Simazine	ND	0.058	0.10	ug/l	1	03/23/24
Terbacil	ND	0.090	2.0	ug/l	1	03/23/24
Thiobencarb	ND	0.069	0.10	ug/l	1	03/23/24
Trithion	ND	0.054	0.10	ug/l	1	03/23/24

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	91%	Conc: 4.43	70-130	03/23/24
Perylene-d12	102%	Conc: 4.95	50-120	03/23/24
Triphenyl phosphate	105%	Conc: 5.12	70-130	03/23/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12118-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Semivolatile Organic Compounds by GC/MS (Continued)							
Method: EPA 525.2			Instr: GCMS16				
Batch ID: W4B2063		Preparation: EPA 525.2/SPE		Prepared: 02/26/24 08:34		Analyst: rmr	
Semivolatile Organics - Low Level by Tandem GC/MS/MS							
Method: EPA 1613B			Instr: GCMS15				
Batch ID: W4C0010		Preparation: EPA 3510C		Prepared: 03/01/24 07:56		Analyst: AJC	
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	1	03/05/24	
Volatile Organics by P&T and GC/MS							
Method: EPA 524.3			Instr: GCMS04				
Batch ID: W4B1568		Preparation: Method (P+T)		Prepared: 02/20/24 12:18		Analyst: ADM	
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l	1	02/20/24	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l	1	02/20/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	106%	Conc: 0.423	70-130			02/20/24	
4-Bromofluorobenzene	103%	Conc: 0.411	70-130			02/20/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Sample Results GEL Laboratories, LLC

Sample: AT-RES-1-S22
 4B12118-01 (Water)

Sampled: 02/12/24 13:30 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 903.1							
Method: EPA 903.1	Batch ID: 2571354	Prepared: 03/05/24 00:00		Analyst: MJ2			
Radium-226	0.138			pCi/L	1	03/05/24	U
Uncertainty: 0.195	MDA: 0.323						

EPA 904.0/ EPA 9320							
Method: EPA 904.0/ EPA 9320	Batch ID: 2572441	Prepared: 03/08/24 00:00		Analyst: JE1			
Radium-228	-0.0424			pCi/L	1	03/08/24	U
Uncertainty: 0.211	MDA: 0.419						

<i>Surrogate(s)</i>							
<i>Barium Carrier</i>	106%		25-125			03/08/24	
<i>Yttrium Carrier</i>	75%		25-125			03/08/24	

EPA 905.0							
Method: EPA 905.0	Batch ID: 2569265	Prepared: 02/21/24 00:00		Analyst: ST2			
Strontium-90	1.16			pCi/L	1	02/21/24	U
Uncertainty: 1.31	MDA: 2.20						

<i>Surrogate(s)</i>							
<i>Strontium Carrier</i>	26.6%		25-125			02/21/24	

EPA 906.0							
Method: EPA 906.0	Batch ID: 2573168	Prepared: 03/07/24 00:00		Analyst: HB2			
Tritium	368			pCi/L	1	03/07/24	U
Uncertainty: 365	MDA: 609						

Sample Results LA Testing - EMSL Analytical, Inc. CA-ELAP #2283, Non-NELAP

Sample: AT-RES-1-S22
 4B12118-01 (Water)

Sampled: 02/12/24 13:30 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 100.2							
Method: EPA 100.2	Batch ID: 322403465	Prepared: 02/13/24 12:15		Analyst: _SUB			
Asbestos	ND		0.20	MFL	1	02/22/24	
Fibers:	Area: 0.0635	Confidence: 0.00-0.75					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:

04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

EPA 903.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2571354 - EPA 903.1										
Blank (1205655681-BLK)										
Radium-226	0.0954	1.00	pCi/L				-			U
Uncertainty: 0.132		MDA: 0.224		Prepared & Analyzed: 03/05/24						
Duplicate (1205655682 D)										
Radium-226	-0.0323	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.118		MDA: 0.322		Prepared & Analyzed: 03/05/24						
Matrix Spike (1205655683 S)										
Radium-226	12.5	1.00	pCi/L	14.8	<	84	80-120			
Uncertainty: 1.22		MDA: 0.244		Prepared & Analyzed: 03/05/24						
BS (1205655684-BKS)										
Radium-226	15.0	1.00	pCi/L	14.8		101	90-110			
Uncertainty: 1.48		MDA: 0.223		Prepared & Analyzed: 03/05/24						

Quality Control Results

EPA 904.0/ EPA 9320

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2572441 - EPA 904.0/ EPA 9320										
Blank (1205657868-BLK)										
Radium-228	0.169	1.00	pCi/L				-			U
Uncertainty: 0.291		MDA: 0.508		Prepared & Analyzed: 03/08/24						
Duplicate (1205657869 D)										
Radium-228	-0.116	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.304		MDA: 0.604		Prepared & Analyzed: 03/08/24						
Matrix Spike (1205657870 S)										
Radium-228	15.8	1.00	pCi/L	16.9	<	93.4	70-130			
Uncertainty: 1.24		MDA: 0.683		Prepared & Analyzed: 03/08/24						
BS (1205657871-BKS)										
Radium-228	2.85	1.00	pCi/L	3.37		84.5	80-120			
Uncertainty: 0.592		MDA: 0.574		Prepared & Analyzed: 03/08/24						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

EPA 905.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2569265 - EPA 905.0										
Blank (1205651666-BLK)										
Strontium-90	-0.235	2.00	pCi/L				-			U
Uncertainty: 0.413	MDA: 0.742									
Duplicate (1205651667 D)										
Strontium-90	-0.234	2.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.678	MDA: 1.19									
Matrix Spike (1205651668 S)										
Strontium-90	32.9	2.00	pCi/L	28.1	<	117	80-120			
Uncertainty: 3.97	MDA: 2.96									
BS (1205651669-BKS)										
Strontium-90	5.71	2.00	pCi/L	5.54		103	90-110			
Uncertainty: 2.02	MDA: 2.70									

Quality Control Results

(Continued)

EPA 906.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573168 - EPA 906.0										
Blank (1205659461-BLK)										
Tritium	33.7	1000	pCi/L				-			U
Uncertainty: 355	MDA: 620									
Duplicate (1205659462 D)										
Tritium	33.2	1000	pCi/L		<		0-20	0	20	U
Uncertainty: 356	MDA: 623									
Matrix Spike (1205659463 S)										
Tritium	10500	1000	pCi/L	12000	<	87.8	80-120			
Uncertainty: 1310	MDA: 1540									
BS (1205659464-BKS)										
Tritium	4850	1000	pCi/L	4830		100	90-110			
Uncertainty: 623	MDA: 702									

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2										
Blank (W4B2044-BLK1)					Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l						
Aldicarb	ND	0.58	2.0	ug/l						
Aldicarb sulfone	ND	0.73	2.0	ug/l						
Aldicarb sulfoxide	ND	1.0	2.0	ug/l						
Carbaryl	ND	1.0	2.0	ug/l						
Carbofuran	ND	1.0	2.0	ug/l						
Methiocarb	ND	1.0	2.0	ug/l						
Methomyl	ND	1.3	2.0	ug/l						
Oxamyl	ND	1.1	2.0	ug/l						
Propoxur (Baygon)	ND	1.4	2.0	ug/l						
<i>Surrogate(s)</i>										
BDMC	10.6			ug/l	10.0		106 70-130			
LCS (W4B2044-BS1)					Prepared: 02/25/24 Analyzed: 02/26/24					
3-Hydroxycarbofuran	11.0	0.82	2.0	ug/l	10.0		110 70-130			
Aldicarb	10.8	0.58	2.0	ug/l	10.0		108 70-130			
Aldicarb sulfone	8.12	0.73	2.0	ug/l	10.0		81 70-130			
Aldicarb sulfoxide	11.3	1.0	2.0	ug/l	10.0		113 70-130			
Carbaryl	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Carbofuran	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Methiocarb	12.6	1.0	2.0	ug/l	10.0		126 70-130			
Methomyl	9.30	1.3	2.0	ug/l	10.0		93 70-130			
Oxamyl	8.16	1.1	2.0	ug/l	10.0		82 70-130			
Propoxur (Baygon)	11.6	1.4	2.0	ug/l	10.0		116 70-130			
<i>Surrogate(s)</i>										
BDMC	12.6			ug/l	10.0		126 70-130			
Matrix Spike (W4B2044-MS1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.5	0.82	2.0	ug/l	10.0	ND	125 70-130			
Aldicarb	12.9	0.58	2.0	ug/l	10.0	ND	129 70-130			
Aldicarb sulfone	9.57	0.73	2.0	ug/l	10.0	ND	96 70-130			
Aldicarb sulfoxide	12.2	1.0	2.0	ug/l	10.0	ND	122 70-130			
Carbaryl	12.4	1.0	2.0	ug/l	10.0	ND	124 70-130			
Carbofuran	11.0	1.0	2.0	ug/l	10.0	ND	110 70-130			
Methiocarb	13.0	1.0	2.0	ug/l	10.0	ND	130 70-130			
Methomyl	10.8	1.3	2.0	ug/l	10.0	ND	108 70-130			
Oxamyl	10.8	1.1	2.0	ug/l	10.0	ND	108 70-130			
Propoxur (Baygon)	12.1	1.4	2.0	ug/l	10.0	ND	121 70-130			
<i>Surrogate(s)</i>										
BDMC	11.8			ug/l	10.0		118 70-130			
Matrix Spike Dup (W4B2044-MSD1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.1	0.82	2.0	ug/l	10.0	ND	121 70-130	3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Carbamates and Urea Pesticides (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2 (Continued)											
Matrix Spike Dup (W4B2044-MSD1)			Source: 3L04005-04			Prepared & Analyzed: 02/25/24					
Aldicarb	11.8	0.58	2.0	ug/l	10.0	ND	118	70-130	9	30	
Aldicarb sulfone	9.24	0.73	2.0	ug/l	10.0	ND	92	70-130	4	30	
Aldicarb sulfoxide	14.0	1.0	2.0	ug/l	10.0	ND	140	70-130	13	30	MS-01
Carbaryl	11.4	1.0	2.0	ug/l	10.0	ND	114	70-130	8	30	
Carbofuran	11.6	1.0	2.0	ug/l	10.0	ND	116	70-130	5	30	
Methiocarb	12.3	1.0	2.0	ug/l	10.0	ND	123	70-130	5	30	
Methomyl	10.7	1.3	2.0	ug/l	10.0	ND	107	70-130	1	30	
Oxamyl	10.6	1.1	2.0	ug/l	10.0	ND	106	70-130	2	30	
Propoxur (Baygon)	12.2	1.4	2.0	ug/l	10.0	ND	122	70-130	1	30	
<i>Surrogate(s)</i>											
BDMC	12.7			ug/l	10.0		127	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B1069 - EPA 515.4										
Blank (W4B1069-BLK1)					Prepared: 02/14/24 Analyzed: 02/23/24					
2,4,5-T	ND	0.065	0.20	ug/l						
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l						
2,4-D	ND	0.14	0.40	ug/l						
2,4-DB	ND	0.19	2.0	ug/l						
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l						
Acifluorfen	ND	0.030	0.40	ug/l						
Bentazon	ND	0.23	2.0	ug/l						
Dalapon	ND	0.11	0.40	ug/l						
DCPA	ND	0.029	0.10	ug/l						
Dicamba	ND	0.15	0.60	ug/l						
Dichloroprop	ND	0.12	0.30	ug/l						
Dinoseb	ND	0.033	0.40	ug/l						
Pentachlorophenol	ND	0.014	0.20	ug/l						
Picloram	ND	0.050	0.60	ug/l						
<i>Surrogate(s)</i>										
2,4-DCAA	9.86			ug/l	10.0		99 70-130			
LCS (W4B1069-BS1)										
Prepared: 02/14/24 Analyzed: 02/23/24										
2,4,5-T	3.97	0.065	0.20	ug/l	4.00		99 70-130			
2,4,5-TP (Silvex)	4.02	0.026	0.20	ug/l	4.00		101 70-130			
2,4-D	7.74	0.14	0.40	ug/l	8.00		97 70-130			
2,4-DB	15.7	0.19	2.0	ug/l	16.0		98 70-130			
3,5-Dichlorobenzoic acid	7.49	0.12	1.0	ug/l	8.00		94 70-130			
Acifluorfen	4.07	0.030	0.40	ug/l	4.00		102 70-130			
Bentazon	15.9	0.23	2.0	ug/l	16.0		99 70-130			
Dalapon	8.10	0.11	0.40	ug/l	8.00		101 70-130			
DCPA	3.34	0.029	0.10	ug/l	4.00		84 70-130			
Dicamba	8.02	0.15	0.60	ug/l	8.00		100 70-130			
Dichloroprop	8.04	0.12	0.30	ug/l	8.00		101 70-130			
Dinoseb	4.01	0.033	0.40	ug/l	4.00		100 70-130			
Pentachlorophenol	3.98	0.014	0.20	ug/l	4.00		100 70-130			
Picloram	4.07	0.050	0.60	ug/l	4.00		102 70-130			
<i>Surrogate(s)</i>										
2,4-DCAA	10.0			ug/l	10.0		100 70-130			
Matrix Spike (W4B1069-MS1)										
Source: 4A22028-03					Prepared: 02/14/24 Analyzed: 02/23/24					
2,4,5-T	4.43	0.065	0.20	ug/l	4.00	ND	111 70-130			
2,4,5-TP (Silvex)	4.18	0.026	0.20	ug/l	4.00	ND	105 70-130			
2,4-D	7.84	0.14	0.40	ug/l	8.00	ND	98 70-130			
2,4-DB	14.8	0.19	2.0	ug/l	16.0	ND	93 70-130			
3,5-Dichlorobenzoic acid	20.5	0.12	1.0	ug/l	8.00	ND	256 70-130			MS-01

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1069 - EPA 515.4 (Continued)											
Matrix Spike (W4B1069-MS1) Source: 4A22028-03 Prepared: 02/14/24 Analyzed: 02/23/24											
Acifluorfen	4.38	0.030	0.40	ug/l	4.00	ND	110	70-130			
Bentazon	16.3	0.23	2.0	ug/l	16.0	ND	102	70-130			
Dalapon	6.82	0.11	0.40	ug/l	8.00	0.584	78	70-130			
DCPA	4.76	0.029	0.10	ug/l	4.00	0.0354	118	70-130			
Dicamba	7.93	0.15	0.60	ug/l	8.00	ND	99	70-130			
Dichloroprop	7.27	0.12	0.30	ug/l	8.00	ND	91	70-130			
Dinoseb	4.08	0.033	0.40	ug/l	4.00	ND	102	70-130			
Pentachlorophenol	4.01	0.014	0.20	ug/l	4.00	ND	100	70-130			
Picloram	5.18	0.050	0.60	ug/l	4.00	ND	129	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.0			ug/l	10.0		100	70-130			
Matrix Spike Dup (W4B1069-MSD1) Source: 4A22028-03 Prepared: 02/14/24 Analyzed: 02/23/24											
2,4,5-T	4.39	0.065	0.20	ug/l	4.00	ND	110	70-130	1	30	
2,4,5-TP (Silvex)	4.10	0.026	0.20	ug/l	4.00	ND	102	70-130	2	30	
2,4-D	6.98	0.14	0.40	ug/l	8.00	ND	87	70-130	11	30	
2,4-DB	14.8	0.19	2.0	ug/l	16.0	ND	92	70-130	0.3	30	
3,5-Dichlorobenzoic acid	22.1	0.12	1.0	ug/l	8.00	ND	277	70-130	8	30	MS-01
Acifluorfen	4.31	0.030	0.40	ug/l	4.00	ND	108	70-130	2	30	
Bentazon	15.6	0.23	2.0	ug/l	16.0	ND	97	70-130	4	30	
Dalapon	6.92	0.11	0.40	ug/l	8.00	0.584	79	70-130	1	30	
DCPA	4.54	0.029	0.10	ug/l	4.00	0.0354	113	70-130	5	30	
Dicamba	7.91	0.15	0.60	ug/l	8.00	ND	99	70-130	0.3	30	
Dichloroprop	6.84	0.12	0.30	ug/l	8.00	ND	85	70-130	6	30	
Dinoseb	4.09	0.033	0.40	ug/l	4.00	ND	102	70-130	0.4	30	
Pentachlorophenol	4.12	0.014	0.20	ug/l	4.00	ND	103	70-130	3	30	
Picloram	4.85	0.050	0.60	ug/l	4.00	ND	121	70-130	6	30	
<i>Surrogate(s)</i>											
2,4-DCAA	10.2			ug/l	10.0		102	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2065 - EPA 508.1											
Blank (W4B2065-BLK1)						Prepared: 02/26/24 Analyzed: 03/09/24					
4,4'-DDD	ND	0.0030	0.010	ug/l							
4,4'-DDE	ND	0.0040	0.010	ug/l							
4,4'-DDT	ND	0.0030	0.010	ug/l							
Aldrin	ND	0.0040	0.010	ug/l							
alpha-BHC	ND	0.0015	0.010	ug/l							
Aroclor 1016	ND	0.048	0.10	ug/l							
Aroclor 1221	ND	0.044	0.10	ug/l							
Aroclor 1232	ND	0.064	0.10	ug/l							
Aroclor 1242	ND	0.070	0.10	ug/l							
Aroclor 1248	ND	0.049	0.10	ug/l							
Aroclor 1254	ND	0.068	0.10	ug/l							
Aroclor 1260	ND	0.076	0.10	ug/l							
beta-BHC	ND	0.0045	0.010	ug/l							
Chlordane (tech)	ND	0.067	0.10	ug/l							
Chlorothalonil	ND	0.0040	0.050	ug/l							
delta-BHC	ND	0.0030	0.010	ug/l							
Dieldrin	ND	0.0030	0.010	ug/l							
Endosulfan I	ND	0.0030	0.010	ug/l							
Endosulfan II	ND	0.0019	0.010	ug/l							
Endosulfan sulfate	ND	0.0030	0.010	ug/l							
Endrin	ND	0.0030	0.010	ug/l							
Endrin aldehyde	ND	0.0040	0.010	ug/l							
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l							
Heptachlor	ND	0.0031	0.010	ug/l							
Heptachlor epoxide	ND	0.0019	0.010	ug/l							
Hexachlorobenzene	ND	0.0019	0.050	ug/l							
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l							
Methoxychlor	ND	0.0030	0.010	ug/l							
PCBs, Total	ND	0.048	0.50	ug/l							
Propachlor	ND	0.045	0.20	ug/l							
Toxaphene	ND	0.37	1.0	ug/l							
Trifluralin	ND	0.0043	0.010	ug/l							
<i>Surrogate(s)</i>											
4,4-Dibromobiphenyl	0.103			ug/l	0.100		103	70-130			
LCS (W4B2065-BS1)						Prepared: 02/26/24 Analyzed: 03/09/24					
4,4'-DDD	0.119	0.0030	0.010	ug/l	0.100		119	70-130			
4,4'-DDE	0.0819	0.0040	0.010	ug/l	0.100		82	70-130			
4,4'-DDT	0.125	0.0030	0.010	ug/l	0.100		125	70-130			
Aldrin	0.0623	0.0040	0.010	ug/l	0.100		62	50-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2065 - EPA 508.1 (Continued)										
LCS (W4B2065-BS1)					Prepared: 02/26/24 Analyzed: 03/09/24					
alpha-BHC	0.113	0.0015	0.010	ug/l	0.100	113	70-130			
beta-BHC	0.121	0.0045	0.010	ug/l	0.100	121	70-130			
delta-BHC	0.125	0.0030	0.010	ug/l	0.100	125	70-130			
Dieldrin	0.114	0.0030	0.010	ug/l	0.100	114	70-130			
Endosulfan I	0.100	0.0030	0.010	ug/l	0.100	100	70-130			
Endosulfan II	0.112	0.0019	0.010	ug/l	0.100	112	70-130			
Endosulfan sulfate	0.108	0.0030	0.010	ug/l	0.100	108	70-130			
Endrin	0.110	0.0030	0.010	ug/l	0.100	110	70-130			
Endrin aldehyde	0.0782	0.0040	0.010	ug/l	0.100	78	70-130			
gamma-BHC (Lindane)	0.121	0.0030	0.010	ug/l	0.100	121	70-130			
Heptachlor	0.116	0.0031	0.010	ug/l	0.100	116	70-130			
Heptachlor epoxide	0.123	0.0019	0.010	ug/l	0.100	123	70-130			
Methoxychlor	0.120	0.0030	0.010	ug/l	0.100	120	70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.127			ug/l	0.100	127	70-130			
LCS (W4B2065-BS2)					Prepared: 02/26/24 Analyzed: 03/09/24					
Toxaphene	1.06	0.37	1.0	ug/l	1.00	106	70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.110			ug/l	0.100	110	70-130			
LCS Dup (W4B2065-BSD1)					Prepared: 02/26/24 Analyzed: 03/09/24					
4,4'-DDD	0.0921	0.0030	0.010	ug/l	0.100	92	70-130	26	30	
4,4'-DDE	0.0707	0.0040	0.010	ug/l	0.100	71	70-130	15	30	
4,4'-DDT	0.0984	0.0030	0.010	ug/l	0.100	98	70-130	24	30	
Aldrin	0.0378	0.0040	0.010	ug/l	0.100	38	50-130	49	30	BS-04
alpha-BHC	0.0914	0.0015	0.010	ug/l	0.100	91	70-130	21	30	
beta-BHC	0.0987	0.0045	0.010	ug/l	0.100	99	70-130	21	30	
delta-BHC	0.103	0.0030	0.010	ug/l	0.100	103	70-130	20	30	
Dieldrin	0.0887	0.0030	0.010	ug/l	0.100	89	70-130	24	30	
Endosulfan I	0.0789	0.0030	0.010	ug/l	0.100	79	70-130	24	30	
Endosulfan II	0.0861	0.0019	0.010	ug/l	0.100	86	70-130	26	30	
Endosulfan sulfate	0.0845	0.0030	0.010	ug/l	0.100	85	70-130	24	30	
Endrin	0.0881	0.0030	0.010	ug/l	0.100	88	70-130	22	30	
Endrin aldehyde	0.0559	0.0040	0.010	ug/l	0.100	56	70-130	33	30	BS-04
gamma-BHC (Lindane)	0.0986	0.0030	0.010	ug/l	0.100	99	70-130	21	30	
Heptachlor	0.0875	0.0031	0.010	ug/l	0.100	87	70-130	28	30	
Heptachlor epoxide	0.0968	0.0019	0.010	ug/l	0.100	97	70-130	24	30	
Methoxychlor	0.0896	0.0030	0.010	ug/l	0.100	90	70-130	29	30	
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0966			ug/l	0.100	97	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1613 - EPA 335.4											
LCS (W4B1613-BS1)											
Cyanide, Total	105	1.5	5.0	ug/l	100		105	90-110			
Matrix Spike (W4B1613-MS1)											
Source: 4B13136-01											
Cyanide, Total	210	1.5	5.0	ug/l	200	3.51	103	90-110			
Matrix Spike Dup (W4B1613-MSD1)											
Source: 4B13136-01											
Cyanide, Total	197	1.5	5.0	ug/l	200	3.51	97	90-110	6	20	

Quality Control Results

(Continued)

Diquat and Paraquat by EPA 549.2

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1161 - EPA 549.2											
Blank (W4B1161-BLK1)											
Diquat	ND	1.2	4.0	ug/l							
LCS (W4B1161-BS1)											
Diquat	20.6	1.2	4.0	ug/l	20.0		103	70-130			
Matrix Spike (W4B1161-MS1)											
Source: 4B14092-01											
Diquat	20.1	1.2	4.0	ug/l	20.0	ND	100	46-122			
Matrix Spike Dup (W4B1161-MSD1)											
Source: 4B14092-01											
Diquat	15.1	1.2	4.0	ug/l	20.0	ND	75	46-122	29	30	

Quality Control Results

(Continued)

Endothall By EPA 548.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1095 - EPA 548.1											
Blank (W4B1095-BLK1)											
Endothall	ND	11	45	ug/l							
LCS (W4B1095-BS1)											
Endothall	105	11	45	ug/l	100		105	80-120			
Matrix Spike (W4B1095-MS1)											
Source: 4B13136-01											
Endothall	14.7	0.0	90	ug/l	200	ND	7	0.1-109			J
Matrix Spike Dup (W4B1095-MSD1)											
Source: 4B13136-01											
Endothall	15.3	0.0	90	ug/l	200	ND	8	0.1-109	4	30	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Glyphosate by EPA 547

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0844 - EPA 547											
Blank (W4B0844-BLK1)											
Glyphosate	ND	1.8	5.0	ug/l	Prepared & Analyzed: 02/13/24						
LCS (W4B0844-BS1)											
Glyphosate	23.1	1.8	5.0	ug/l	25.0	92	70-130				
Matrix Spike (W4B0844-MS1)											
Source: 4A31024-01											
Glyphosate	24.8	1.8	5.0	ug/l	25.0	ND	99	41-149			
Matrix Spike (W4B0844-MS2)											
Source: 4A31024-01											
Glyphosate	21.9	1.8	5.0	ug/l	25.0	ND	87	41-149			
Matrix Spike Dup (W4B0844-MSD1)											
Source: 4A31024-01											
Glyphosate	31.2	1.8	5.0	ug/l	25.0	ND	125	41-149	23	30	
Matrix Spike Dup (W4B0844-MSD2)											
Source: 4A31024-01											
Glyphosate	21.1	1.8	5.0	ug/l	25.0	ND	84	41-149	4	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Haloacetic Acids (HAAs) by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1492 - EPA 552.3											
Blank (W4B1492-BLK1)						Prepared: 02/20/24 Analyzed: 03/02/24					
Dibromoacetic acid (dbaa)	ND	0.28	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l							
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l							
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.7			ug/l	10.0		107	70-130			
LCS (W4B1492-BS1)						Prepared: 02/20/24 Analyzed: 03/02/24					
Dibromoacetic acid (dbaa)	10.6	0.28	1.0	ug/l	10.0		106	70-130			
Dichloroacetic acid (dcaa)	10.3	0.29	1.0	ug/l	10.0		103	70-130			
Monobromoacetic acid (mbaa)	10.2	0.34	1.0	ug/l	10.0		102	70-130			
Monochloroacetic acid (mcaa)	10.1	0.31	2.0	ug/l	10.0		101	70-130			
Trichloroacetic acid (tcaa)	10.2	0.29	1.0	ug/l	10.0		102	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.4			ug/l	10.0		104	70-130			
Matrix Spike (W4B1492-MS1)			Source: 3L15005-01			Prepared: 02/20/24 Analyzed: 03/02/24					
Dibromoacetic acid (dbaa)	10.9	0.28	1.0	ug/l	10.0	0.579	103	70-130			
Dichloroacetic acid (dcaa)	10.8	0.29	1.0	ug/l	10.0	0.357	104	70-130			
Monobromoacetic acid (mbaa)	10.5	0.34	1.0	ug/l	10.0	ND	105	70-130			
Monochloroacetic acid (mcaa)	9.80	0.31	2.0	ug/l	10.0	0.374	94	70-130			
Trichloroacetic acid (tcaa)	9.77	0.29	1.0	ug/l	10.0	ND	98	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.6			ug/l	10.0		106	70-130			
Matrix Spike Dup (W4B1492-MSD1)			Source: 3L15005-01			Prepared: 02/20/24 Analyzed: 03/02/24					
Dibromoacetic acid (dbaa)	10.9	0.28	1.0	ug/l	10.0	0.579	103	70-130	0.5	30	
Dichloroacetic acid (dcaa)	10.7	0.29	1.0	ug/l	10.0	0.357	103	70-130	0.6	30	
Monobromoacetic acid (mbaa)	10.3	0.34	1.0	ug/l	10.0	ND	103	70-130	1	30	
Monochloroacetic acid (mcaa)	10.4	0.31	2.0	ug/l	10.0	0.374	100	70-130	6	30	
Trichloroacetic acid (tcaa)	9.42	0.29	1.0	ug/l	10.0	ND	94	70-130	4	30	
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.2			ug/l	10.0		102	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0150 - EPA 245.1											
Blank (W4C0150-BLK1)					Prepared: 03/04/24 Analyzed: 03/07/24						
Mercury, Total	ND	0.037	0.050	ug/l							
LCS (W4C0150-BS1)					Prepared: 03/04/24 Analyzed: 03/07/24						
Mercury, Total	1.03	0.037	0.050	ug/l	1.00		103	85-115			
Matrix Spike (W4C0150-MS1)					Source: 3L04005-04 Prepared: 03/04/24 Analyzed: 03/07/24						
Mercury, Total	1.03	0.037	0.050	ug/l	1.00	ND	103	70-130			
Matrix Spike (W4C0150-MS2)					Source: 4B23109-01 Prepared: 03/04/24 Analyzed: 03/07/24						
Mercury, Total	1.02	0.037	0.050	ug/l	1.00	ND	102	70-130			
Matrix Spike Dup (W4C0150-MSD1)					Source: 3L04005-04 Prepared: 03/04/24 Analyzed: 03/07/24						
Mercury, Total	1.02	0.037	0.050	ug/l	1.00	ND	102	70-130	0.3	20	
Matrix Spike Dup (W4C0150-MSD2)					Source: 4B23109-01 Prepared: 03/04/24 Analyzed: 03/07/24						
Mercury, Total	1.07	0.037	0.050	ug/l	1.00	ND	107	70-130	4	20	

Quality Control Results (Continued)

Perchlorate by EPA 314.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1575 - EPA 314.0											
Blank (W4B1575-BLK1)					Prepared & Analyzed: 02/20/24						
Perchlorate	ND	0.26	1.0	ug/l							
LCS (W4B1575-BS1)					Prepared & Analyzed: 02/20/24						
Perchlorate	9.44	0.26	1.0	ug/l	10.0		94	85-115			
Matrix Spike (W4B1575-MS1)					Source: 4B13037-01 Prepared & Analyzed: 02/20/24						
Perchlorate	12.3	0.26	1.0	ug/l	10.0	3.15	91	80-120			
Matrix Spike Dup (W4B1575-MSD1)					Source: 4B13037-01 Prepared & Analyzed: 02/20/24						
Perchlorate	12.3	0.26	1.0	ug/l	10.0	3.15	92	80-120	0.6	15	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Radiological Parameters by APHA/EPA Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1067 - EPA 900.0											
Blank (W4B1067-BLK1)											
Gross Beta	-0.844			pCi/L							
Counting Uncertainty: 0.779	MDA: 1.292										
LCS (W4B1067-BS1)											
Gross Beta	13.7			pCi/L	16.0		86	72-123			
Counting Uncertainty: 0.822	MDA: 0.831										
Matrix Spike (W4B1067-MS1)											
Gross Beta	15.2			pCi/L	16.0	1.04	88	61-125			
Counting Uncertainty: 0.872	MDA: 0.921										
Matrix Spike Dup (W4B1067-MSD1)											
Gross Beta	15.6			pCi/L	16.0	1.04	91	61-125	3	30	
Counting Uncertainty: 0.934	MDA: 1.038										
Batch: W4B1576 - SM 7110C											
Blank (W4B1576-BLK1)											
Gross Alpha	-0.112			pCi/L							
Counting Uncertainty: 0.176	MDA: 0.054										
LCS (W4B1576-BS1)											
Gross Alpha	7.85			pCi/L	7.20		109	60-122			
Counting Uncertainty: 0.463	MDA: 0.054										
Matrix Spike (W4B1576-MS1)											
Gross Alpha	19.1			pCi/L	18.0	1.93	96	28-149			
Counting Uncertainty: 0.456	MDA: 0.336										
Matrix Spike Dup (W4B1576-MSD1)											
Gross Alpha	20.1			pCi/L	18.0	1.93	101	28-149	5	30	
Counting Uncertainty: 0.47	MDA: 0.336										

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatiles Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2063 - EPA 525.2											
Blank (W4B2063-BLK1)						Prepared: 02/26/24 Analyzed: 03/23/24					
Alachlor	ND	0.063	0.10	ug/l							
Atrazine	ND	0.042	0.10	ug/l							
Benzo (a) pyrene	ND	0.045	0.10	ug/l							
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							
Bromacil	ND	0.24	0.50	ug/l							
Butachlor	ND	0.040	0.10	ug/l							
Captan	ND	0.32	1.0	ug/l							
Chlorpropham	ND	0.040	0.10	ug/l							
Diazinon	ND	0.022	0.10	ug/l							
Dimethoate	ND	0.041	0.20	ug/l							
Diphenamid	ND	0.030	0.10	ug/l							
Disulfoton	ND	0.11	0.20	ug/l							
EPTC	ND	0.020	0.10	ug/l							
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							
Metolachlor	ND	0.030	0.10	ug/l							
Metribuzin	ND	0.030	0.10	ug/l							
Molinate	ND	0.030	0.10	ug/l							
Prometryn	ND	0.030	0.10	ug/l							
Simazine	ND	0.058	0.10	ug/l							
Terbacil	ND	0.090	2.0	ug/l							
Thiobencarb	ND	0.069	0.10	ug/l							
Trithion	ND	0.054	0.10	ug/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.42			ug/l	5.00		88	70-130			
Perylene-d12	4.85			ug/l	5.00		97	50-120			
Triphenyl phosphate	4.84			ug/l	5.00		97	70-130			
LCS (W4B2063-BS1)						Prepared: 02/26/24 Analyzed: 03/23/24					
Alachlor	7.27	0.063	0.10	ug/l	7.50		97	70-130			
Atrazine	5.85	0.042	0.10	ug/l	5.00		117	70-130			
Benzo (a) pyrene	3.68	0.045	0.10	ug/l	5.00		74	60-130			
Bis(2-ethylhexyl)adipate	5.47	0.38	5.0	ug/l	5.00		109	70-130			
Bis(2-ethylhexyl)phthalate	5.61	0.41	3.0	ug/l	5.00		112	70-130			
Bromacil	4.44	0.24	0.50	ug/l	5.00		89	70-130			
Butachlor	4.63	0.040	0.10	ug/l	5.00		93	70-130			
Captan	5.16	0.32	1.0	ug/l	5.00		103	70-130			
Chlorpropham	4.96	0.040	0.10	ug/l	5.00		99	70-130			
Diazinon	2.91	0.022	0.10	ug/l	5.00		58	50-120			
Dimethoate	3.89	0.041	0.20	ug/l	5.00		78	50-120			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2063 - EPA 525.2 (Continued)										
LCS (W4B2063-BS1)					Prepared: 02/26/24 Analyzed: 03/23/24					
Diphenamid	5.50	0.030	0.10	ug/l	5.00	110	70-130			
Disulfoton	4.63	0.11	0.20	ug/l	5.00	93	50-120			
EPTC	5.20	0.020	0.10	ug/l	5.00	104	70-130			
Hexachlorocyclopentadiene	1.84	0.092	1.0	ug/l	2.50	74	33-106			
Metolachlor	4.50	0.030	0.10	ug/l	5.00	90	60-130			
Metribuzin	4.34	0.030	0.10	ug/l	5.00	87	50-120			
Molinate	5.33	0.030	0.10	ug/l	5.00	107	70-130			
Prometryn	3.75	0.030	0.10	ug/l	5.00	75	30-120			
Simazine	4.45	0.058	0.10	ug/l	5.00	89	60-130			
Terbacil	6.28	0.090	2.0	ug/l	5.00	126	70-130			
Thiobencarb	4.53	0.069	0.10	ug/l	5.00	91	70-130			
Trithion	4.75	0.054	0.10	ug/l	5.00	95	70-130			
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	4.92			ug/l	5.00	98	70-130			
Perylene-d12	4.35			ug/l	5.00	87	50-120			
Triphenyl phosphate	5.54			ug/l	5.00	111	70-130			
LCS Dup (W4B2063-BSD1)					Prepared: 02/26/24 Analyzed: 03/23/24					
Alachlor	6.93	0.063	0.10	ug/l	7.50	92	70-130	5	30	
Atrazine	5.40	0.042	0.10	ug/l	5.00	108	70-130	8	30	
Benzo (a) pyrene	3.66	0.045	0.10	ug/l	5.00	73	60-130	0.6	30	
Bis(2-ethylhexyl)adipate	5.13	0.38	5.0	ug/l	5.00	103	70-130	6	30	
Bis(2-ethylhexyl)phthalate	5.34	0.41	3.0	ug/l	5.00	107	70-130	5	30	
Bromacil	4.36	0.24	0.50	ug/l	5.00	87	70-130	2	30	
Butachlor	4.40	0.040	0.10	ug/l	5.00	88	70-130	5	30	
Captan	5.02	0.32	1.0	ug/l	5.00	100	70-130	3	30	
Chlorpropham	5.00	0.040	0.10	ug/l	5.00	100	70-130	0.8	30	
Diazinon	2.80	0.022	0.10	ug/l	5.00	56	50-120	4	30	
Dimethoate	3.54	0.041	0.20	ug/l	5.00	71	50-120	9	30	
Diphenamid	5.03	0.030	0.10	ug/l	5.00	101	70-130	9	30	
Disulfoton	4.43	0.11	0.20	ug/l	5.00	89	50-120	5	30	
EPTC	4.82	0.020	0.10	ug/l	5.00	96	70-130	8	30	
Hexachlorocyclopentadiene	2.03	0.092	1.0	ug/l	2.50	81	33-106	10	30	
Metolachlor	4.46	0.030	0.10	ug/l	5.00	89	60-130	1	30	
Metribuzin	4.18	0.030	0.10	ug/l	5.00	84	50-120	4	30	
Molinate	4.99	0.030	0.10	ug/l	5.00	100	70-130	7	30	
Prometryn	3.72	0.030	0.10	ug/l	5.00	74	30-120	0.6	30	
Simazine	4.59	0.058	0.10	ug/l	5.00	92	60-130	3	30	
Terbacil	5.36	0.090	2.0	ug/l	5.00	107	70-130	16	30	
Thiobencarb	4.51	0.069	0.10	ug/l	5.00	90	70-130	0.4	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2063 - EPA 525.2 (Continued)											
LCS Dup (W4B2063-BSD1)											
Triethion	4.34	0.054	0.10	ug/l	5.00		87	70-130	9	30	
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.55			ug/l	5.00		91	70-130			
Perylene-d12	4.25			ug/l	5.00		85	50-120			
Triphenyl phosphate	5.29			ug/l	5.00		106	70-130			

Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0010 - EPA 1613B											
Blank (W4C0010-BLK1)											
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l							
LCS (W4C0010-BS1)											
2,3,7,8-TCDD (Dioxin)	7.98	2.48	5.00	pg/l	10.0		80	73-146			
LCS Dup (W4C0010-BSD1)											
2,3,7,8-TCDD (Dioxin)	9.48	2.48	5.00	pg/l	10.0		95	73-146	17	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
04/04/2024 08:28

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organics by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1568 - EPA 524.3										
Blank (W4B1568-BLK1)					Prepared & Analyzed: 02/20/24					
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l						
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l						
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.423			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.406			ug/l	0.400		101 70-130			
LCS (W4B1568-BS1)					Prepared & Analyzed: 02/20/24					
1,2-Dibromo-3-chloropropane	0.0624	0.0042	0.010	ug/l	0.0500		125 70-130			
1,2-Dibromoethane (EDB)	0.0577	0.0029	0.020	ug/l	0.0500		115 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.425			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.406			ug/l	0.400		101 70-130			
LCS Dup (W4B1568-BSD1)					Prepared & Analyzed: 02/20/24					
1,2-Dibromo-3-chloropropane	0.0580	0.0042	0.010	ug/l	0.0500		116 70-130	7	30	
1,2-Dibromoethane (EDB)	0.0558	0.0029	0.020	ug/l	0.0500		112 70-130	3	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.424			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.411			ug/l	0.400		103 70-130			
Duplicate (W4B1568-DUP1)					Source: 4B09104-02RE1		Prepared & Analyzed: 02/20/24			
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l		ND				30
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l		ND				30
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.424			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.409			ug/l	0.400		102 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 090123

Reported:
 04/04/2024 08:28

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
U	Result not detected above the detection limit
%REC	Percent Recovery
Dil	Dilution
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B12120

Project: COSM 97-005 - COPCs

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 3/08/2024

Received Date: 2/12/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

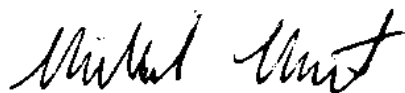
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/12/24 with the Chain-of-Custody document. The samples were received in good condition, at 11.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-1-S4	Windsor Lee	4B12120-01	Water	02/12/24 12:25	
AT-GS-1-S7	Windsor Lee	4B12120-02	Water	02/12/24 12:10	
AT-GS-1-S8	Windsor Lee	4B12120-03	Water	02/12/24 12:10	
AT-UV-1-S10	Windsor Lee	4B12120-04	Water	02/12/24 12:15	
AT-UV-1-S10D	Windsor Lee	4B12120-05	Water	02/12/24 12:15	
AT-GAC-1-S11	Windsor Lee	4B12120-06	Water	02/12/24 13:30	
AT-GAC-1-S23	Windsor Lee	4B12120-07	Water	02/12/24 13:43	
AT-RO-1-S14	Windsor Lee	4B12120-08	Water	02/12/24 12:15	
AT-RO-1-S24	Windsor Lee	4B12120-09	Water	02/12/24 12:30	
AT-DEC-1-S18	Windsor Lee	4B12120-10	Water	02/12/24 13:05	
AT-DEC-1-S19	Windsor Lee	4B12120-11	Water	02/12/24 12:50	
AT-RES-1-S22	Windsor Lee	4B12120-12	Water	02/12/24 13:30	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	✘		
Bromomethane	74-83-9	✘		
Chloroethane	75-00-3	✘		
Di-isopropyl ether	108-20-3	✘		
2-Butanone	78-93-3	✘		
2,2-Dichloropropane	594-20-7	✘		
Bromochloromethane	74-97-5	✘		
1,1-Dichloropropene	563-58-6	✘		
Dibromomethane	74-95-3	✘		
1,3-Dichloropropane	142-28-9	✘		
2-Hexanone	591-78-6	✘		
Bromobenzene	108-86-1	✘		
1,2,3-Trichloropropane	96-18-4	✘		
p-Isopropyltoluene	99-87-6	✘		
Hexachlorobutadiene	87-68-3	✘		
1,3-Dichloropropene, Total	542-75-6	✘		
Acetone	67-64-1	✘		
Acrylonitrile	107-13-1	✘		
EPA 537.1 in Water				
PFHpA	375-85-9	✘		
SRL 524M-TCP in Water				
1,2,3-Trichloropropane	96-18-4		✘	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-1-S4

Sampled: 02/12/24 12:25 by Windsor Lee

4B12120-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375		Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM	
1,2,3-Trichloropropane	0.043	0.0012	0.0050	ug/l	1	02/17/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545		Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA	
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	02/24/24	
ADONA	ND	0.48	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.76	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/24/24	
PFBS	1.5	0.50	1.7	ng/l	1	02/24/24	J
PFDA	ND	0.40	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.57	1.7	ng/l	1	02/24/24	
PFHpA	0.59	0.47	1.7	ng/l	1	02/24/24	J
PFHxA	2.1	0.43	1.7	ng/l	1	02/24/24	
PFHxS	1.4	0.52	1.7	ng/l	1	02/24/24	J
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	0.65	0.58	1.7	ng/l	1	02/24/24	J
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.40	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.42	1.7	ng/l	1	02/24/24	

Surrogate(s)

13C2-PFDA	111%	Conc: 38.7	70-130	02/24/24
13C2-PFHxA	104%	Conc: 36.5	70-130	02/24/24
d5-EtFOSAA	103%	Conc: 145	70-130	02/24/24
HFPO-DA-13C3	99%	Conc: 34.7	70-130	02/24/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	0.78	0.27	0.50	ug/l	1	02/24/24	

4B12120

Page 3 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S4

Sampled: 02/12/24 12:25 by Windsor Lee

4B12120-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1-Dichloroethene	4.0	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/24/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	0.96	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	5.9	0.27	0.50	ug/l	1	02/24/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S4

Sampled: 02/12/24 12:25 by Windsor Lee

4B12120-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B1931

Preparation: EPA 5030B

Prepared: 02/23/24 07:45

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	1.3	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	5.9		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	51	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	0.29	0.18	0.50	ug/l	1	02/24/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	80%	Conc: 40.2	70-130	02/24/24
4-Bromofluorobenzene	79%	Conc: 39.6	70-130	02/24/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S4

Sampled: 02/12/24 12:25 by Windsor Lee

4B12120-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B1931

Preparation: EPA 5030B

Prepared: 02/23/24 07:45

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-1-S4

Sampled: 02/12/24 12:25 by Windsor Lee

4B12120-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B0972

Preparation: EPA 522/SPE

Prepared: 02/13/24 08:09

Analyst: mld

1,4-Dioxane	46	0.28	0.70	ug/l	10	02/15/24	M-06
-------------	----	------	------	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	88%	Conc: 8.98	70-130			02/15/24	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S7

Sampled: 02/12/24 12:10 by Windsor Lee

4B12120-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	0.31	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 9.28	70-130			02/14/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/17/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.51	1.8	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.48	1.8	ng/l	1	02/24/24	
ADONA	ND	0.50	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.79	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.52	1.8	ng/l	1	02/24/24	
PFBS	ND	0.52	1.8	ng/l	1	02/24/24	
PFDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.59	1.8	ng/l	1	02/24/24	
PFHpA	ND	0.48	1.8	ng/l	1	02/24/24	
PFHxA	ND	0.44	1.8	ng/l	1	02/24/24	
PFHxS	ND	0.54	1.8	ng/l	1	02/24/24	
PFNA	ND	0.47	1.8	ng/l	1	02/24/24	
PFOA	ND	0.60	1.8	ng/l	1	02/24/24	
PFOS	ND	0.48	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.38	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.43	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	111%	Conc: 40.2	70-130			02/24/24	
13C2-PFHxA	106%	Conc: 38.3	70-130			02/24/24	
d5-EtFOSAA	106%	Conc: 154	70-130			02/24/24	
HFPO-DA-13C3	100%	Conc: 36.2	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12120

Page 7 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S7

Sampled: 02/12/24 12:10 by Windsor Lee

4B12120-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	0.42	0.16	0.50	ug/l	1	02/24/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/24/24	
Bromoform	4.7	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S7

Sampled: 02/12/24 12:10 by Windsor Lee

4B12120-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	1.1	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	0.21	0.18	0.50	ug/l	1	02/24/24	J
THMs, Total	5.8		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	4.0	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S7

Sampled: 02/12/24 12:10 by Windsor Lee

4B12120-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B			Prepared: 02/23/24 07:45		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 40.0	70-130			02/24/24	
4-Bromofluorobenzene	78%	Conc: 38.8	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S8

Sampled: 02/12/24 12:10 by Windsor Lee

4B12120-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W4B1375

Preparation: EPA 5030B

Prepared: 02/16/24 06:46

Analyst: ADM

1,2,3-Trichloropropane	0.045	0.0012	0.0050	ug/l	1	02/17/24	
------------------------	-------	--------	--------	------	---	----------	--

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B1931

Preparation: EPA 5030B

Prepared: 02/23/24 07:45

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	0.77	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	4.0	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	0.44	0.24	0.50	ug/l	1	02/24/24	J
Bromoform	1.9	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S8

Sampled: 02/12/24 12:10 by Windsor Lee

4B12120-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Carbon tetrachloride	0.98	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	6.0	0.27	0.50	ug/l	1	02/24/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	1.4	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	1.3	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	9.3		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-1-S8

Sampled: 02/12/24 12:10 by Windsor Lee

4B12120-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	50	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	0.27	0.18	0.50	ug/l	1	02/24/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 40.1	70-130			02/24/24	
4-Bromofluorobenzene	80%	Conc: 40.0	70-130			02/24/24	

Sample Results

(Continued)

Sample: AT-GS-1-S8

Sampled: 02/12/24 12:10 by Windsor Lee

4B12120-03RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W4B0972		Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld	
1,4-Dioxane	48	0.28	0.70	ug/l	10	02/15/24	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	90%	Conc: 8.90	70-130			02/15/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-1-S10

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	84%	Conc: 8.47	70-130			02/14/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	0.015	0.0012	0.0050	ug/l	1	02/17/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	02/24/24	
ADONA	ND	0.48	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/24/24	
PFBS	1.6	0.50	1.7	ng/l	1	02/24/24	J
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.57	1.7	ng/l	1	02/24/24	
PFHpA	0.62	0.46	1.7	ng/l	1	02/24/24	J
PFHxA	2.2	0.42	1.7	ng/l	1	02/24/24	
PFHxS	1.4	0.51	1.7	ng/l	1	02/24/24	J
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	0.63	0.58	1.7	ng/l	1	02/24/24	J
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	116%	Conc: 40.1	70-130			02/24/24	
13C2-PFHxA	109%	Conc: 37.7	70-130			02/24/24	
d5-EtFOSAA	105%	Conc: 146	70-130			02/24/24	
HFPO-DA-13C3	102%	Conc: 35.3	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-1-S10

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	0.31	0.27	0.50	ug/l	1	02/24/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/24/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	0.69	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	4.5	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-1-S10

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	4.5		0.50	ug/l	1	02/24/24	
Toluene	0.30	0.29	0.50	ug/l	1	02/24/24	J
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-UV-1-S10

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B			Prepared: 02/23/24 07:45		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.4	70-130			02/24/24	
4-Bromofluorobenzene	78%	Conc: 39.0	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-1-S10D

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	86%	Conc: 8.39	70-130			02/14/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	0.017	0.0012	0.0050	ug/l	1	02/17/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.48	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	02/24/24	
ADONA	ND	0.47	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.74	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	02/24/24	
PFBS	1.6	0.49	1.7	ng/l	1	02/24/24	J
PFDA	ND	0.38	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.56	1.7	ng/l	1	02/24/24	
PFHpA	0.55	0.45	1.7	ng/l	1	02/24/24	J
PFHxA	2.2	0.41	1.7	ng/l	1	02/24/24	
PFHxS	1.4	0.50	1.7	ng/l	1	02/24/24	J
PFNA	ND	0.44	1.7	ng/l	1	02/24/24	
PFOA	0.57	0.57	1.7	ng/l	1	02/24/24	J
PFOS	ND	0.45	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.38	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.40	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 38.0	70-130			02/24/24	
13C2-PFHxA	109%	Conc: 36.8	70-130			02/24/24	
d5-EtFOSAA	104%	Conc: 141	70-130			02/24/24	
HFPO-DA-13C3	103%	Conc: 35.0	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-1-S10D

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	0.34	0.27	0.50	ug/l	1	02/24/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	4.0	3.1	5.0	ug/l	1	02/24/24	J
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/24/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	0.70	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	4.7	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-1-S10D

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	4.7		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	0.18	0.18	0.50	ug/l	1	02/24/24	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-UV-1-S10D

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B			Prepared: 02/23/24 07:45		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 40.0	70-130			02/24/24	
4-Bromofluorobenzene	79%	Conc: 39.7	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S11

Sampled: 02/12/24 13:30 by Windsor Lee

4B12120-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	1.7	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	87%	Conc: 8.45	70-130			02/14/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/17/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.8	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	02/24/24	
ADONA	ND	0.49	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	02/24/24	
PFBS	ND	0.51	1.8	ng/l	1	02/24/24	
PFDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.58	1.8	ng/l	1	02/24/24	
PFHpA	ND	0.47	1.8	ng/l	1	02/24/24	
PFHxA	ND	0.43	1.8	ng/l	1	02/24/24	
PFHxS	ND	0.52	1.8	ng/l	1	02/24/24	
PFNA	ND	0.46	1.8	ng/l	1	02/24/24	
PFOA	ND	0.59	1.8	ng/l	1	02/24/24	
PFOS	ND	0.47	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.42	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 39.4	70-130			02/24/24	
13C2-PFHxA	107%	Conc: 37.8	70-130			02/24/24	
d5-EtFOSAA	105%	Conc: 148	70-130			02/24/24	
HFPO-DA-13C3	101%	Conc: 35.5	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12120

Page 22 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S11

Sampled: 02/12/24 13:30 by Windsor Lee

4B12120-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/24/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S11

Sampled: 02/12/24 13:30 by Windsor Lee

4B12120-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	ND		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S11

Sampled: 02/12/24 13:30 by Windsor Lee

4B12120-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.5	70-130			02/24/24	
4-Bromofluorobenzene	77%	Conc: 38.4	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S23

Sampled: 02/12/24 13:43 by Windsor Lee

4B12120-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	4.8	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	87%	Conc: 8.70	70-130			02/14/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/17/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	02/24/24	
ADONA	ND	0.48	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.76	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/24/24	
PFBS	ND	0.50	1.7	ng/l	1	02/24/24	
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.57	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.47	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.52	1.7	ng/l	1	02/24/24	
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	ND	0.58	1.7	ng/l	1	02/24/24	
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	114%	Conc: 39.6	70-130			02/24/24	
13C2-PFHxA	111%	Conc: 38.5	70-130			02/24/24	
d5-EtFOSAA	109%	Conc: 151	70-130			02/24/24	
HFPO-DA-13C3	103%	Conc: 35.9	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12120

Page 26 of 66

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S23

Sampled: 02/12/24 13:43 by Windsor Lee

4B12120-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/24/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S23

Sampled: 02/12/24 13:43 by Windsor Lee

4B12120-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Chloromethane	0.24	0.23	0.50	ug/l	1	02/24/24	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	ND		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-GAC-1-S23

Sampled: 02/12/24 13:43 by Windsor Lee

4B12120-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B			Prepared: 02/23/24 07:45		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	78%	Conc: 39.0	70-130			02/24/24	
4-Bromofluorobenzene	77%	Conc: 38.4	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-1-S14

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	0.54	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	84%	Conc: 8.28	70-130			02/14/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/17/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11CI-PF3OUdS	ND	0.46	1.7	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	02/24/24	
ADONA	ND	0.46	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.72	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.47	1.7	ng/l	1	02/24/24	
PFBS	ND	0.48	1.7	ng/l	1	02/24/24	
PFDA	ND	0.37	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.54	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.44	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.40	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.49	1.7	ng/l	1	02/24/24	
PFNA	ND	0.43	1.7	ng/l	1	02/24/24	
PFOA	ND	0.55	1.7	ng/l	1	02/24/24	
PFOS	ND	0.44	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.37	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.34	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.39	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	113%	Conc: 37.3	70-130			02/24/24	
13C2-PFHxA	106%	Conc: 35.1	70-130			02/24/24	
d5-EtFOSAA	105%	Conc: 139	70-130			02/24/24	
HFPO-DA-13C3	99%	Conc: 32.7	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12120

Page 30 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-1-S14

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	0.23	0.16	0.50	ug/l	1	02/24/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	0.33	0.24	0.50	ug/l	1	02/24/24	J
Bromoform	5.1	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-1-S14

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	1.5	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	6.6		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	3.3	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-1-S14

Sampled: 02/12/24 12:15 by Windsor Lee

4B12120-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.7	70-130			02/24/24	
4-Bromofluorobenzene	79%	Conc: 39.7	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-1-S24

Sampled: 02/12/24 12:30 by Windsor Lee

4B12120-09 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	0.046	0.028	0.070	ug/l	1	02/14/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	85%	Conc: 8.71	70-130			02/14/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/17/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.44	1.7	ng/l	1	02/24/24	
ADONA	ND	0.46	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	02/24/24	
PFBS	ND	0.48	1.7	ng/l	1	02/24/24	
PFDA	ND	0.38	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.55	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.45	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.41	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.50	1.7	ng/l	1	02/24/24	
PFNA	ND	0.43	1.7	ng/l	1	02/24/24	
PFOA	ND	0.56	1.7	ng/l	1	02/24/24	
PFOS	ND	0.44	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.38	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.40	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	113%	Conc: 37.8	70-130			02/24/24	
13C2-PFHxA	107%	Conc: 35.9	70-130			02/24/24	
d5-EtFOSAA	106%	Conc: 142	70-130			02/24/24	
HFPO-DA-13C3	101%	Conc: 33.9	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12120

Page 34 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-1-S24

Sampled: 02/12/24 12:30 by Windsor Lee

4B12120-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	0.48	0.16	0.50	ug/l	1	02/24/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	16	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	0.67	0.24	0.50	ug/l	1	02/24/24	
Bromoform	5.7	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	0.28	0.27	0.50	ug/l	1	02/24/24	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-1-S24

Sampled: 02/12/24 12:30 by Windsor Lee

4B12120-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B		Prepared: 02/23/24 07:45		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	2.2	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	8.6		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	4.5	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-1-S24

Sampled: 02/12/24 12:30 by Windsor Lee

4B12120-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1931		Preparation: EPA 5030B			Prepared: 02/23/24 07:45		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	81%	Conc: 40.6	70-130			02/24/24	
4-Bromofluorobenzene	80%	Conc: 39.9	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-1-S18

Sampled: 02/12/24 13:05 by Windsor Lee

4B12120-10 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	0.16	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	87%	Conc: 8.76	70-130			02/14/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1375	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/17/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.50	1.8	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	02/24/24	
ADONA	ND	0.49	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.78	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.52	1.8	ng/l	1	02/24/24	
PFBS	ND	0.52	1.8	ng/l	1	02/24/24	
PFDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.59	1.8	ng/l	1	02/24/24	
PFHpA	ND	0.48	1.8	ng/l	1	02/24/24	
PFHxA	ND	0.44	1.8	ng/l	1	02/24/24	
PFHxS	ND	0.53	1.8	ng/l	1	02/24/24	
PFNA	ND	0.47	1.8	ng/l	1	02/24/24	
PFOA	ND	0.60	1.8	ng/l	1	02/24/24	
PFOS	ND	0.48	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.43	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	106%	Conc: 38.1	70-130			02/24/24	
13C2-PFHxA	107%	Conc: 38.3	70-130			02/24/24	
d5-EtFOSAA	97%	Conc: 138	70-130			02/24/24	
HFPO-DA-13C3	101%	Conc: 36.2	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12120

Page 38 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-1-S18

Sampled: 02/12/24 13:05 by Windsor Lee

4B12120-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	0.39	0.16	0.50	ug/l	1	02/24/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	0.58	0.24	0.50	ug/l	1	02/24/24	
Bromoform	5.7	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-1-S18

Sampled: 02/12/24 13:05 by Windsor Lee

4B12120-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	2.0	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	8.3		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	4.4	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-DEC-1-S18

Sampled: 02/12/24 13:05 by Windsor Lee

4B12120-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B			Prepared: 02/23/24 07:48		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.7	70-130			02/24/24	
4-Bromofluorobenzene	80%	Conc: 39.8	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-1-S19

Sampled: 02/12/24 12:50 by Windsor Lee

4B12120-11 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	0.15	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	86%	Conc: 8.51	70-130			02/14/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1376	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/18/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.46	1.6	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.43	1.6	ng/l	1	02/24/24	
ADONA	ND	0.45	1.6	ng/l	1	02/24/24	
EtFOSAA	ND	0.39	1.6	ng/l	1	02/24/24	
HFPO-DA	ND	0.72	1.6	ng/l	1	02/24/24	
MeFOSAA	ND	0.47	1.6	ng/l	1	02/24/24	
PFBS	ND	0.47	1.6	ng/l	1	02/24/24	
PFDA	ND	0.37	1.6	ng/l	1	02/24/24	
PFDoA	ND	0.54	1.6	ng/l	1	02/24/24	
PFHpA	ND	0.44	1.6	ng/l	1	02/24/24	
PFHxA	ND	0.40	1.6	ng/l	1	02/24/24	
PFHxS	ND	0.49	1.6	ng/l	1	02/24/24	
PFNA	ND	0.43	1.6	ng/l	1	02/24/24	
PFOA	ND	0.55	1.6	ng/l	1	02/24/24	
PFOS	ND	0.44	1.6	ng/l	1	02/24/24	
PFTeDA	ND	0.37	1.6	ng/l	1	02/24/24	
PFTTrDA	ND	0.34	1.6	ng/l	1	02/24/24	
PFUnA	ND	0.39	1.6	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	115%	Conc: 37.7	70-130			02/24/24	
13C2-PFHxA	105%	Conc: 34.5	70-130			02/24/24	
d5-EtFOSAA	106%	Conc: 139	70-130			02/24/24	
HFPO-DA-13C3	100%	Conc: 33.0	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12120

Page 42 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-1-S19

Sampled: 02/12/24 12:50 by Windsor Lee

4B12120-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	0.24	0.24	0.50	ug/l	1	02/24/24	J
Bromoform	4.1	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-1-S19

Sampled: 02/12/24 12:50 by Windsor Lee

4B12120-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	1.2	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	5.3		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	0.57	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-1-S19

Sampled: 02/12/24 12:50 by Windsor Lee

4B12120-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.5	70-130			02/24/24	
4-Bromofluorobenzene	79%	Conc: 39.4	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12120-12 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	0.17	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	97%	Conc: 9.42	70-130			02/14/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1376	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/18/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	02/24/24	
ADONA	ND	0.46	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	02/24/24	
PFBS	ND	0.49	1.7	ng/l	1	02/24/24	
PFDA	ND	0.38	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.55	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.45	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.41	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.50	1.7	ng/l	1	02/24/24	
PFNA	ND	0.44	1.7	ng/l	1	02/24/24	
PFOA	ND	0.56	1.7	ng/l	1	02/24/24	
PFOS	ND	0.45	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.38	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.40	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 37.7	70-130			02/24/24	
13C2-PFHxA	108%	Conc: 36.3	70-130			02/24/24	
d5-EtFOSAA	104%	Conc: 139	70-130			02/24/24	
HFPO-DA-13C3	101%	Conc: 34.1	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12120

Page 46 of 66

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12120-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/24/24	
Bromoform	5.1	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12120-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	1.3	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	6.4		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	0.54	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 13:30 by Windsor Lee

4B12120-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.4	70-130			02/24/24	
4-Bromofluorobenzene	78%	Conc: 38.9	70-130			02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0972 - EPA 522											
Blank (W4B0972-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
Prepared: 02/13/24 Analyzed: 02/14/24											
Surrogate(s)											
1,4-Dioxane-d8	7.87			ug/l	10.0		79	70-130			
LCS (W4B0972-BS1)											
1,4-Dioxane	0.0345	0.028	0.070	ug/l	0.0600		58	50-150			J
Prepared: 02/13/24 Analyzed: 02/14/24											
Surrogate(s)											
1,4-Dioxane-d8	7.70			ug/l	10.0		77	70-130			
LCS Dup (W4B0972-BSD1)											
1,4-Dioxane	0.0367	0.028	0.070	ug/l	0.0600		61	50-150	6	50	J
Prepared: 02/13/24 Analyzed: 02/14/24											
Surrogate(s)											
1,4-Dioxane-d8	7.89			ug/l	10.0		79	70-130			

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1375 - SRL 524M-TCP											
Blank (W4B1375-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
Prepared: 02/16/24 Analyzed: 02/17/24											
LCS (W4B1375-BS1)											
1,2,3-Trichloropropane	0.0197	0.0012	0.0050	ug/l	0.0200		99	80-120			
Prepared: 02/16/24 Analyzed: 02/17/24											
LCS Dup (W4B1375-BSD1)											
1,2,3-Trichloropropane	0.0211	0.0012	0.0050	ug/l	0.0200		106	80-120	7	20	
Prepared: 02/16/24 Analyzed: 02/17/24											
Duplicate (W4B1375-DUP1)											
1,2,3-Trichloropropane	0.0466	0.0012	0.0050	ug/l		0.0426			9	20	
Source: 4B12120-01											
Prepared: 02/16/24 Analyzed: 02/17/24											
Batch: W4B1376 - SRL 524M-TCP											
Blank (W4B1376-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
Prepared: 02/16/24 Analyzed: 02/18/24											
LCS (W4B1376-BS1)											
1,2,3-Trichloropropane	0.0211	0.0012	0.0050	ug/l	0.0200		106	80-120			
Prepared: 02/16/24 Analyzed: 02/18/24											
LCS Dup (W4B1376-BSD1)											
1,2,3-Trichloropropane	0.0229	0.0012	0.0050	ug/l	0.0200		114	80-120	8	20	
Prepared: 02/16/24 Analyzed: 02/18/24											
Duplicate (W4B1376-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
Source: 4B13129-05											
Prepared: 02/16/24 Analyzed: 02/18/24											

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1545 - EPA 537.1									
Blank (W4B1545-BLK1)					Prepared: 02/20/24 Analyzed: 02/24/24				
11CI-PF3OUdS	ND	0.56	2.0	ng/l					
9CI-PF3ONS	ND	0.53	2.0	ng/l					
ADONA	ND	0.55	2.0	ng/l					
EtFOSAA	ND	0.48	2.0	ng/l					
HFPO-DA	ND	0.87	2.0	ng/l					
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	45.4			ng/l	40.0		113 70-130		
13C2-PFHxA	43.9			ng/l	40.0		110 70-130		
d5-EtFOSAA	166			ng/l	160		103 70-130		
HFPO-DA-13C3	42.0			ng/l	40.0		105 70-130		
LCS (W4B1545-BS1)					Prepared: 02/20/24 Analyzed: 02/24/24				
11CI-PF3OUdS	17.4	0.56	2.0	ng/l	20.0		87 70-130		
9CI-PF3ONS	17.1	0.53	2.0	ng/l	20.0		86 70-130		
ADONA	18.9	0.55	2.0	ng/l	20.0		94 70-130		
EtFOSAA	17.7	0.48	2.0	ng/l	20.0		89 70-130		
HFPO-DA	18.4	0.87	2.0	ng/l	20.0		92 70-130		
MeFOSAA	17.2	0.58	2.0	ng/l	20.0		86 70-130		
PFBS	19.4	0.58	2.0	ng/l	20.0		97 70-130		
PFDA	18.0	0.45	2.0	ng/l	20.0		90 70-130		
PFDoA	19.1	0.66	2.0	ng/l	20.0		96 70-130		
PFHpA	19.4	0.53	2.0	ng/l	20.0		97 70-130		
PFHxA	19.3	0.49	2.0	ng/l	20.0		97 70-130		
PFHxS	18.4	0.59	2.0	ng/l	20.0		92 70-130		
PFNA	19.7	0.52	2.0	ng/l	20.0		98 70-130		
PFOA	19.3	0.67	2.0	ng/l	20.0		96 70-130		
PFOS	18.5	0.53	2.0	ng/l	20.0		92 70-130		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1545 - EPA 537.1 (Continued)										
LCS (W4B1545-BS1)					Prepared: 02/20/24 Analyzed: 02/24/24					
PFTeDA	18.7	0.45	2.0	ng/l	20.0		94 70-130			
PFTTrDA	17.6	0.42	2.0	ng/l	20.0		88 70-130			
PFUnA	18.4	0.48	2.0	ng/l	20.0		92 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	44.9			ng/l	40.0		112 70-130			
13C2-PFHxA	43.3			ng/l	40.0		108 70-130			
d5-EtFOSAA	164			ng/l	160		103 70-130			
HFPO-DA-13C3	41.7			ng/l	40.0		104 70-130			
LCS Dup (W4B1545-BSD1)					Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	17.6	0.56	2.0	ng/l	20.0		88 70-130	1	30	
9CI-PF3ONS	17.6	0.53	2.0	ng/l	20.0		88 70-130	3	30	
ADONA	18.6	0.55	2.0	ng/l	20.0		93 70-130	2	30	
EtFOSAA	17.5	0.48	2.0	ng/l	20.0		88 70-130	1	30	
HFPO-DA	17.3	0.87	2.0	ng/l	20.0		86 70-130	6	30	
MeFOSAA	16.7	0.58	2.0	ng/l	20.0		83 70-130	3	30	
PFBS	19.1	0.58	2.0	ng/l	20.0		95 70-130	2	30	
PFDA	18.2	0.45	2.0	ng/l	20.0		91 70-130	0.7	30	
PFDoA	19.2	0.66	2.0	ng/l	20.0		96 70-130	0.6	30	
PFHpA	19.0	0.53	2.0	ng/l	20.0		95 70-130	2	30	
PFHxA	19.0	0.49	2.0	ng/l	20.0		95 70-130	2	30	
PFHxS	18.1	0.59	2.0	ng/l	20.0		90 70-130	2	30	
PFNA	20.0	0.52	2.0	ng/l	20.0		100 70-130	2	30	
PFOA	19.2	0.67	2.0	ng/l	20.0		96 70-130	0.2	30	
PFOS	18.4	0.53	2.0	ng/l	20.0		92 70-130	0.2	30	
PFTeDA	17.9	0.45	2.0	ng/l	20.0		89 70-130	5	30	
PFTTrDA	18.0	0.42	2.0	ng/l	20.0		90 70-130	2	30	
PFUnA	18.6	0.48	2.0	ng/l	20.0		93 70-130	1	30	
<i>Surrogate(s)</i>										
13C2-PFDA	47.5			ng/l	40.0		119 70-130			
13C2-PFHxA	44.1			ng/l	40.0		110 70-130			
d5-EtFOSAA	166			ng/l	160		104 70-130			
HFPO-DA-13C3	42.1			ng/l	40.0		105 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B1931 - EPA 524.2											
Blank (W4B1931-BLK1)						Prepared & Analyzed: 02/23/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1931 - EPA 524.2 (Continued)											
Blank (W4B1931-BLK1)						Prepared & Analyzed: 02/23/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	41.8			ug/l	50.0		84	70-130			
4-Bromofluorobenzene	42.1			ug/l	50.0		84	70-130			
LCS (W4B1931-BS1)						Prepared & Analyzed: 02/23/24					
1,1,1,2-Tetrachloroethane	4.97	0.24	0.50	ug/l	5.00		99	70-130			
1,1,1-Trichloroethane	4.76	0.26	0.50	ug/l	5.00		95	70-130			
1,1,2,2-Tetrachloroethane	4.78	0.20	0.50	ug/l	5.00		96	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1931 - EPA 524.2 (Continued)									
LCS (W4B1931-BS1)					Prepared & Analyzed: 02/23/24				
1,1,2-Trichloroethane	4.78	0.19	0.50	ug/l	5.00	96	70-130		
1,1-Dichloroethane	4.80	0.27	0.50	ug/l	5.00	96	70-130		
1,1-Dichloroethene	4.55	0.16	0.50	ug/l	5.00	91	70-130		
1,1-Dichloropropene	4.76	0.14	0.50	ug/l	5.00	95	70-130		
1,2,3-Trichlorobenzene	5.13	0.40	0.50	ug/l	5.00	103	70-130		
1,2,3-Trichloropropane	4.97	0.22	0.50	ug/l	5.00	99	70-130		
1,2,4-Trichlorobenzene	5.19	0.17	0.50	ug/l	5.00	104	70-130		
1,2,4-Trimethylbenzene	5.00	0.20	0.50	ug/l	5.00	100	70-130		
1,2-Dichloroethane	4.59	0.24	0.50	ug/l	5.00	92	70-130		
1,2-Dichloropropane	4.75	0.13	0.50	ug/l	5.00	95	70-130		
1,3,5-Trimethylbenzene	4.89	0.17	0.50	ug/l	5.00	98	70-130		
1,3-Dichloropropane	5.04	0.27	0.50	ug/l	5.00	101	70-130		
2,2-Dichloropropane	4.69	0.17	0.50	ug/l	5.00	94	70-130		
2-Butanone	4.26	1.5	5.0	ug/l	5.00	85	70-130		J
2-Chlorotoluene	5.25	0.15	0.50	ug/l	5.00	105	70-130		
2-Hexanone	4.85	1.2	5.0	ug/l	5.00	97	70-130		J
4-Chlorotoluene	5.17	0.15	0.50	ug/l	5.00	103	70-130		
4-Methyl-2-pentanone	4.71	1.8	5.0	ug/l	5.00	94	70-130		J
Acetone	43.2	3.1	5.0	ug/l	50.0	86	70-130		
Benzene	4.73	0.15	0.50	ug/l	5.00	95	70-130		
Bromobenzene	5.01	0.15	0.50	ug/l	5.00	100	70-130		
Bromochloromethane	4.68	0.15	0.50	ug/l	5.00	94	70-130		
Bromodichloromethane	4.70	0.24	0.50	ug/l	5.00	94	70-130		
Bromoform	5.09	0.38	0.50	ug/l	5.00	102	70-130		
Bromomethane	4.57	0.27	0.50	ug/l	5.00	91	70-130		
Carbon Disulfide	4.67	0.25	0.50	ug/l	5.00	93	70-130		
Carbon tetrachloride	4.96	0.27	0.50	ug/l	5.00	99	70-130		
Chlorobenzene	5.15	0.15	0.50	ug/l	5.00	103	70-130		
Chloroethane	4.54	0.17	0.50	ug/l	5.00	91	70-130		
Chloroform	4.74	0.27	0.50	ug/l	5.00	95	70-130		
Chloromethane	4.58	0.23	0.50	ug/l	5.00	92	70-130		
cis-1,2-Dichloroethene	4.62	0.25	0.50	ug/l	5.00	92	70-130		
cis-1,3-Dichloropropene	4.83	0.30	0.50	ug/l	5.00	97	70-130		
Dibromochloromethane	4.97	0.20	0.50	ug/l	5.00	99	70-130		
Dibromomethane	4.87	0.20	0.50	ug/l	5.00	97	70-130		
Dichlorodifluoromethane (Freon 12)	4.62	0.45	0.50	ug/l	5.00	92	70-130		
Di-isopropyl ether	18.6	1.1	2.0	ug/l	20.0	93	70-130		
Ethyl tert-butyl ether	19.1	1.0	2.0	ug/l	20.0	95	70-130		
Ethylbenzene	4.80	0.21	0.50	ug/l	5.00	96	70-130		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1931 - EPA 524.2 (Continued)										
LCS (W4B1931-BS1)					Prepared & Analyzed: 02/23/24					
Freon 113	4.80	1.5	5.0	ug/l	5.00		96 70-130			J
Hexachlorobutadiene	5.41	0.40	0.50	ug/l	5.00		108 70-130			
Isopropylbenzene	4.84	0.18	0.50	ug/l	5.00		97 70-130			
m,p-Xylene	4.82	0.33	0.50	ug/l	5.00		96 70-130			
m-Dichlorobenzene	5.08	0.14	0.50	ug/l	5.00		102 70-130			
Methyl tert-butyl ether (MTBE)	19.2	0.94	2.0	ug/l	20.0		96 70-130			
Methylene chloride	4.32	0.30	0.50	ug/l	5.00		86 70-130			
Naphthalene	4.77	0.35	0.50	ug/l	5.00		95 70-130			
n-Butylbenzene	5.17	0.29	0.50	ug/l	5.00		103 70-130			
n-Propylbenzene	4.85	0.18	0.50	ug/l	5.00		97 70-130			
o-Dichlorobenzene	4.99	0.19	0.50	ug/l	5.00		100 70-130			
o-Xylene	4.80	0.20	0.50	ug/l	5.00		96 70-130			
p-Dichlorobenzene	5.15	0.18	0.50	ug/l	5.00		103 70-130			
p-Isopropyltoluene	5.00	0.25	0.50	ug/l	5.00		100 70-130			
sec-Butylbenzene	4.95	0.24	0.50	ug/l	5.00		99 70-130			
Styrene	5.00	0.19	0.50	ug/l	5.00		100 70-130			
Tert-amyl methyl ether	19.6	0.59	2.0	ug/l	20.0		98 70-130			
tert-Butylbenzene	4.96	0.18	0.50	ug/l	5.00		99 70-130			
Tetrachloroethene	5.02	0.18	0.50	ug/l	5.00		100 70-130			
Toluene	4.79	0.29	0.50	ug/l	5.00		96 70-130			
trans-1,2-Dichloroethene	4.70	0.26	0.50	ug/l	5.00		94 70-130			
trans-1,3-Dichloropropene	4.92	0.32	0.50	ug/l	5.00		98 70-130			
Trichloroethene	4.96	0.18	0.50	ug/l	5.00		99 70-130			
Trichlorofluoromethane	4.73	0.18	0.50	ug/l	5.00		95 70-130			
Vinyl chloride	4.49	0.18	0.50	ug/l	5.00		90 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	48.2			ug/l	50.0		96 70-130			
4-Bromofluorobenzene	47.6			ug/l	50.0		95 70-130			
LCS Dup (W4B1931-BS1)					Prepared & Analyzed: 02/23/24					
1,1,1,2-Tetrachloroethane	4.92	0.24	0.50	ug/l	5.00		98 70-130	1	30	
1,1,1-Trichloroethane	4.59	0.26	0.50	ug/l	5.00		92 70-130	4	30	
1,1,2,2-Tetrachloroethane	4.80	0.20	0.50	ug/l	5.00		96 70-130	0.5	30	
1,1,2-Trichloroethane	4.84	0.19	0.50	ug/l	5.00		97 70-130	1	30	
1,1-Dichloroethane	4.74	0.27	0.50	ug/l	5.00		95 70-130	1	30	
1,1-Dichloroethene	4.45	0.16	0.50	ug/l	5.00		89 70-130	2	30	
1,1-Dichloropropene	4.49	0.14	0.50	ug/l	5.00		90 70-130	6	30	
1,2,3-Trichlorobenzene	5.10	0.40	0.50	ug/l	5.00		102 70-130	0.6	30	
1,2,3-Trichloropropane	5.01	0.22	0.50	ug/l	5.00		100 70-130	0.8	30	
1,2,4-Trichlorobenzene	5.11	0.17	0.50	ug/l	5.00		102 70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1931 - EPA 524.2 (Continued)										
LCS Dup (W4B1931-BSD1)					Prepared & Analyzed: 02/23/24					
1,2,4-Trimethylbenzene	4.84	0.20	0.50	ug/l	5.00	97	70-130	3	30	
1,2-Dichloroethane	4.72	0.24	0.50	ug/l	5.00	94	70-130	3	30	
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00	95	70-130	0.4	30	
1,3,5-Trimethylbenzene	4.78	0.17	0.50	ug/l	5.00	96	70-130	2	30	
1,3-Dichloropropane	5.09	0.27	0.50	ug/l	5.00	102	70-130	0.9	30	
2,2-Dichloropropane	4.63	0.17	0.50	ug/l	5.00	93	70-130	1	30	
2-Butanone	4.63	1.5	5.0	ug/l	5.00	93	70-130	9	30	J
2-Chlorotoluene	5.10	0.15	0.50	ug/l	5.00	102	70-130	3	30	
2-Hexanone	5.07	1.2	5.0	ug/l	5.00	101	70-130	4	30	
4-Chlorotoluene	5.02	0.15	0.50	ug/l	5.00	100	70-130	3	30	
4-Methyl-2-pentanone	4.97	1.8	5.0	ug/l	5.00	99	70-130	5	30	J
Acetone	45.4	3.1	5.0	ug/l	50.0	91	70-130	5	30	
Benzene	4.71	0.15	0.50	ug/l	5.00	94	70-130	0.4	30	
Bromobenzene	4.99	0.15	0.50	ug/l	5.00	100	70-130	0.4	30	
Bromochloromethane	4.74	0.15	0.50	ug/l	5.00	95	70-130	1	30	
Bromodichloromethane	4.61	0.24	0.50	ug/l	5.00	92	70-130	2	30	
Bromoform	5.15	0.38	0.50	ug/l	5.00	103	70-130	1	30	
Bromomethane	4.58	0.27	0.50	ug/l	5.00	92	70-130	0.1	30	
Carbon Disulfide	4.51	0.25	0.50	ug/l	5.00	90	70-130	3	30	
Carbon tetrachloride	4.69	0.27	0.50	ug/l	5.00	94	70-130	6	30	
Chlorobenzene	5.10	0.15	0.50	ug/l	5.00	102	70-130	1	30	
Chloroethane	4.41	0.17	0.50	ug/l	5.00	88	70-130	3	30	
Chloroform	4.62	0.27	0.50	ug/l	5.00	92	70-130	2	30	
Chloromethane	4.51	0.23	0.50	ug/l	5.00	90	70-130	1	30	
cis-1,2-Dichloroethene	4.68	0.25	0.50	ug/l	5.00	94	70-130	1	30	
cis-1,3-Dichloropropene	5.14	0.30	0.50	ug/l	5.00	103	70-130	6	30	
Dibromochloromethane	5.04	0.20	0.50	ug/l	5.00	101	70-130	1	30	
Dibromomethane	4.87	0.20	0.50	ug/l	5.00	97	70-130	0.02	30	
Dichlorodifluoromethane (Freon 12)	4.34	0.45	0.50	ug/l	5.00	87	70-130	6	30	
Di-isopropyl ether	19.1	1.1	2.0	ug/l	20.0	96	70-130	3	30	
Ethyl tert-butyl ether	19.4	1.0	2.0	ug/l	20.0	97	70-130	2	30	
Ethylbenzene	4.66	0.21	0.50	ug/l	5.00	93	70-130	3	30	
Freon 113	4.58	1.5	5.0	ug/l	5.00	92	70-130	5	30	J
Hexachlorobutadiene	5.17	0.40	0.50	ug/l	5.00	103	70-130	5	30	
Isopropylbenzene	4.63	0.18	0.50	ug/l	5.00	93	70-130	4	30	
m,p-Xylene	4.66	0.33	0.50	ug/l	5.00	93	70-130	3	30	
m-Dichlorobenzene	4.97	0.14	0.50	ug/l	5.00	99	70-130	2	30	
Methyl tert-butyl ether (MTBE)	20.0	0.94	2.0	ug/l	20.0	100	70-130	4	30	
Methylene chloride	4.46	0.30	0.50	ug/l	5.00	89	70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1931 - EPA 524.2 (Continued)											
LCS Dup (W4B1931-BSD1)					Prepared & Analyzed: 02/23/24						
Naphthalene	4.80	0.35	0.50	ug/l	5.00		96	70-130	0.6	30	
n-Butylbenzene	4.91	0.29	0.50	ug/l	5.00		98	70-130	5	30	
n-Propylbenzene	4.67	0.18	0.50	ug/l	5.00		93	70-130	4	30	
o-Dichlorobenzene	4.92	0.19	0.50	ug/l	5.00		98	70-130	1	30	
o-Xylene	4.69	0.20	0.50	ug/l	5.00		94	70-130	2	30	
p-Dichlorobenzene	5.01	0.18	0.50	ug/l	5.00		100	70-130	3	30	
p-Isopropyltoluene	4.77	0.25	0.50	ug/l	5.00		95	70-130	5	30	
sec-Butylbenzene	4.71	0.24	0.50	ug/l	5.00		94	70-130	5	30	
Styrene	4.94	0.19	0.50	ug/l	5.00		99	70-130	1	30	
Tert-amyl methyl ether	20.1	0.59	2.0	ug/l	20.0		101	70-130	3	30	
tert-Butylbenzene	4.76	0.18	0.50	ug/l	5.00		95	70-130	4	30	
Tetrachloroethene	4.76	0.18	0.50	ug/l	5.00		95	70-130	5	30	
Toluene	4.64	0.29	0.50	ug/l	5.00		93	70-130	3	30	
trans-1,2-Dichloroethene	4.64	0.26	0.50	ug/l	5.00		93	70-130	1	30	
trans-1,3-Dichloropropene	4.96	0.32	0.50	ug/l	5.00		99	70-130	0.9	30	
Trichloroethene	4.81	0.18	0.50	ug/l	5.00		96	70-130	3	30	
Trichlorofluoromethane	4.55	0.18	0.50	ug/l	5.00		91	70-130	4	30	
Vinyl chloride	4.43	0.18	0.50	ug/l	5.00		89	70-130	1	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	47.8			ug/l	50.0		96	70-130			
4-Bromofluorobenzene	47.1			ug/l	50.0		94	70-130			

Batch: W4B1932 - EPA 524.2

Blank (W4B1932-BLK1)					Prepared: 02/23/24 Analyzed: 02/24/24						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)											
Blank (W4B1932-BLK1)						Prepared: 02/23/24 Analyzed: 02/24/24					
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)										
Blank (W4B1932-BLK1)					Prepared: 02/23/24 Analyzed: 02/24/24					
o-Xylene	ND	0.20	0.50	ug/l						
p-Dichlorobenzene	ND	0.18	0.50	ug/l						
p-Isopropyltoluene	ND	0.25	0.50	ug/l						
sec-Butylbenzene	ND	0.24	0.50	ug/l						
Styrene	ND	0.19	0.50	ug/l						
Tert-amyl methyl ether	ND	0.59	2.0	ug/l						
tert-Butylbenzene	ND	0.18	0.50	ug/l						
Tetrachloroethene	ND	0.18	0.50	ug/l						
THMs, Total	ND		0.50	ug/l						
Toluene	ND	0.29	0.50	ug/l						
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l						
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l						
Trichloroethene	ND	0.18	0.50	ug/l						
Trichlorofluoromethane	ND	0.18	0.50	ug/l						
Vinyl chloride	ND	0.18	0.50	ug/l						
Xylenes, Total	ND	0.33	0.50	ug/l						
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	40.1			ug/l	50.0		80 70-130			
4-Bromofluorobenzene	41.0			ug/l	50.0		82 70-130			
LCS (W4B1932-BS1)					Prepared: 02/23/24 Analyzed: 02/24/24					
1,1,1,2-Tetrachloroethane	4.95	0.24	0.50	ug/l	5.00		99 70-130			
1,1,1-Trichloroethane	4.83	0.26	0.50	ug/l	5.00		97 70-130			
1,1,2,2-Tetrachloroethane	4.53	0.20	0.50	ug/l	5.00		91 70-130			
1,1,2-Trichloroethane	4.79	0.19	0.50	ug/l	5.00		96 70-130			
1,1-Dichloroethane	4.79	0.27	0.50	ug/l	5.00		96 70-130			
1,1-Dichloroethene	4.60	0.16	0.50	ug/l	5.00		92 70-130			
1,1-Dichloropropene	4.67	0.14	0.50	ug/l	5.00		93 70-130			
1,2,3-Trichlorobenzene	4.95	0.40	0.50	ug/l	5.00		99 70-130			
1,2,3-Trichloropropane	4.92	0.22	0.50	ug/l	5.00		98 70-130			
1,2,4-Trichlorobenzene	4.93	0.17	0.50	ug/l	5.00		99 70-130			
1,2,4-Trimethylbenzene	4.70	0.20	0.50	ug/l	5.00		94 70-130			
1,2-Dichloroethane	4.77	0.24	0.50	ug/l	5.00		95 70-130			
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00		95 70-130			
1,3,5-Trimethylbenzene	4.76	0.17	0.50	ug/l	5.00		95 70-130			
1,3-Dichloropropane	4.94	0.27	0.50	ug/l	5.00		99 70-130			
2,2-Dichloropropane	3.94	0.17	0.50	ug/l	5.00		79 70-130			
2-Butanone	4.40	1.5	5.0	ug/l	5.00		88 70-130			J
2-Chlorotoluene	5.08	0.15	0.50	ug/l	5.00		102 70-130			
2-Hexanone	4.85	1.2	5.0	ug/l	5.00		97 70-130			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)										
LCS (W4B1932-BS1)					Prepared: 02/23/24 Analyzed: 02/24/24					
4-Chlorotoluene	5.00	0.15	0.50	ug/l	5.00		100 70-130			
4-Methyl-2-pentanone	4.75	1.8	5.0	ug/l	5.00		95 70-130			J
Acetone	44.7	3.1	5.0	ug/l	50.0		89 70-130			
Benzene	4.89	0.15	0.50	ug/l	5.00		98 70-130			
Bromobenzene	4.92	0.15	0.50	ug/l	5.00		98 70-130			
Bromochloromethane	4.57	0.15	0.50	ug/l	5.00		91 70-130			
Bromodichloromethane	4.67	0.24	0.50	ug/l	5.00		93 70-130			
Bromoform	5.00	0.38	0.50	ug/l	5.00		100 70-130			
Bromomethane	4.60	0.27	0.50	ug/l	5.00		92 70-130			
Carbon Disulfide	4.51	0.25	0.50	ug/l	5.00		90 70-130			
Carbon tetrachloride	4.99	0.27	0.50	ug/l	5.00		100 70-130			
Chlorobenzene	5.08	0.15	0.50	ug/l	5.00		102 70-130			
Chloroethane	4.63	0.17	0.50	ug/l	5.00		93 70-130			
Chloroform	4.74	0.27	0.50	ug/l	5.00		95 70-130			
Chloromethane	4.74	0.23	0.50	ug/l	5.00		95 70-130			
cis-1,2-Dichloroethene	4.60	0.25	0.50	ug/l	5.00		92 70-130			
cis-1,3-Dichloropropene	4.76	0.30	0.50	ug/l	5.00		95 70-130			
Dibromochloromethane	4.96	0.20	0.50	ug/l	5.00		99 70-130			
Dibromomethane	4.85	0.20	0.50	ug/l	5.00		97 70-130			
Dichlorodifluoromethane (Freon 12)	4.67	0.45	0.50	ug/l	5.00		93 70-130			
Di-isopropyl ether	18.5	1.1	2.0	ug/l	20.0		93 70-130			
Ethyl tert-butyl ether	18.6	1.0	2.0	ug/l	20.0		93 70-130			
Ethylbenzene	4.74	0.21	0.50	ug/l	5.00		95 70-130			
Freon 113	4.69	1.5	5.0	ug/l	5.00		94 70-130			J
Hexachlorobutadiene	5.09	0.40	0.50	ug/l	5.00		102 70-130			
Isopropylbenzene	4.68	0.18	0.50	ug/l	5.00		94 70-130			
m,p-Xylene	4.74	0.33	0.50	ug/l	5.00		95 70-130			
m-Dichlorobenzene	4.85	0.14	0.50	ug/l	5.00		97 70-130			
Methyl tert-butyl ether (MTBE)	19.2	0.94	2.0	ug/l	20.0		96 70-130			
Methylene chloride	4.29	0.30	0.50	ug/l	5.00		86 70-130			
Naphthalene	4.59	0.35	0.50	ug/l	5.00		92 70-130			
n-Butylbenzene	4.87	0.29	0.50	ug/l	5.00		97 70-130			
n-Propylbenzene	4.68	0.18	0.50	ug/l	5.00		94 70-130			
o-Dichlorobenzene	4.87	0.19	0.50	ug/l	5.00		97 70-130			
o-Xylene	4.74	0.20	0.50	ug/l	5.00		95 70-130			
p-Dichlorobenzene	5.00	0.18	0.50	ug/l	5.00		100 70-130			
p-Isopropyltoluene	4.65	0.25	0.50	ug/l	5.00		93 70-130			
sec-Butylbenzene	4.71	0.24	0.50	ug/l	5.00		94 70-130			
Styrene	4.94	0.19	0.50	ug/l	5.00		99 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)											
LCS (W4B1932-BS1)											
					Prepared: 02/23/24 Analyzed: 02/24/24						
Tert-amyl methyl ether	19.5	0.59	2.0	ug/l	20.0		98	70-130			
tert-Butylbenzene	4.81	0.18	0.50	ug/l	5.00		96	70-130			
Tetrachloroethene	4.90	0.18	0.50	ug/l	5.00		98	70-130			
Toluene	4.61	0.29	0.50	ug/l	5.00		92	70-130			
trans-1,2-Dichloroethene	4.74	0.26	0.50	ug/l	5.00		95	70-130			
trans-1,3-Dichloropropene	4.59	0.32	0.50	ug/l	5.00		92	70-130			
Trichloroethene	4.97	0.18	0.50	ug/l	5.00		99	70-130			
Trichlorofluoromethane	4.79	0.18	0.50	ug/l	5.00		96	70-130			
Vinyl chloride	4.54	0.18	0.50	ug/l	5.00		91	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	46.7			ug/l	50.0		93	70-130			
4-Bromofluorobenzene	44.1			ug/l	50.0		88	70-130			
LCS Dup (W4B1932-BSD1)											
					Prepared: 02/23/24 Analyzed: 02/24/24						
1,1,1,2-Tetrachloroethane	4.95	0.24	0.50	ug/l	5.00		99	70-130	0.06	30	
1,1,1-Trichloroethane	4.70	0.26	0.50	ug/l	5.00		94	70-130	3	30	
1,1,2,2-Tetrachloroethane	4.75	0.20	0.50	ug/l	5.00		95	70-130	5	30	
1,1,2-Trichloroethane	4.83	0.19	0.50	ug/l	5.00		97	70-130	0.9	30	
1,1-Dichloroethane	4.72	0.27	0.50	ug/l	5.00		94	70-130	2	30	
1,1-Dichloroethene	4.48	0.16	0.50	ug/l	5.00		90	70-130	3	30	
1,1-Dichloropropene	4.53	0.14	0.50	ug/l	5.00		91	70-130	3	30	
1,2,3-Trichlorobenzene	4.84	0.40	0.50	ug/l	5.00		97	70-130	2	30	
1,2,3-Trichloropropane	4.90	0.22	0.50	ug/l	5.00		98	70-130	0.3	30	
1,2,4-Trichlorobenzene	4.88	0.17	0.50	ug/l	5.00		98	70-130	1	30	
1,2,4-Trimethylbenzene	4.62	0.20	0.50	ug/l	5.00		92	70-130	2	30	
1,2-Dichloroethane	4.78	0.24	0.50	ug/l	5.00		96	70-130	0.1	30	
1,2-Dichloropropane	4.64	0.13	0.50	ug/l	5.00		93	70-130	2	30	
1,3,5-Trimethylbenzene	4.65	0.17	0.50	ug/l	5.00		93	70-130	2	30	
1,3-Dichloropropane	5.08	0.27	0.50	ug/l	5.00		102	70-130	3	30	
2,2-Dichloropropane	4.09	0.17	0.50	ug/l	5.00		82	70-130	4	30	
2-Butanone	4.49	1.5	5.0	ug/l	5.00		90	70-130	2	30	J
2-Chlorotoluene	5.03	0.15	0.50	ug/l	5.00		101	70-130	1	30	
2-Hexanone	4.73	1.2	5.0	ug/l	5.00		95	70-130	3	30	J
4-Chlorotoluene	4.94	0.15	0.50	ug/l	5.00		99	70-130	1	30	
4-Methyl-2-pentanone	4.76	1.8	5.0	ug/l	5.00		95	70-130	0.2	30	J
Acetone	48.4	3.1	5.0	ug/l	50.0		97	70-130	8	30	
Benzene	4.81	0.15	0.50	ug/l	5.00		96	70-130	2	30	
Bromobenzene	4.91	0.15	0.50	ug/l	5.00		98	70-130	0.3	30	
Bromochloromethane	4.69	0.15	0.50	ug/l	5.00		94	70-130	2	30	
Bromodichloromethane	4.63	0.24	0.50	ug/l	5.00		93	70-130	0.9	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)										
LCS Dup (W4B1932-BSD1)					Prepared: 02/23/24 Analyzed: 02/24/24					
Bromoform	5.09	0.38	0.50	ug/l	5.00	102	70-130	2	30	
Bromomethane	4.53	0.27	0.50	ug/l	5.00	91	70-130	1	30	
Carbon Disulfide	4.49	0.25	0.50	ug/l	5.00	90	70-130	0.5	30	
Carbon tetrachloride	4.75	0.27	0.50	ug/l	5.00	95	70-130	5	30	
Chlorobenzene	5.09	0.15	0.50	ug/l	5.00	102	70-130	0.2	30	
Chloroethane	4.40	0.17	0.50	ug/l	5.00	88	70-130	5	30	
Chloroform	4.71	0.27	0.50	ug/l	5.00	94	70-130	0.7	30	
Chloromethane	4.51	0.23	0.50	ug/l	5.00	90	70-130	5	30	
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00	91	70-130	1	30	
cis-1,3-Dichloropropene	4.89	0.30	0.50	ug/l	5.00	98	70-130	3	30	
Dibromochloromethane	4.88	0.20	0.50	ug/l	5.00	98	70-130	2	30	
Dibromomethane	4.83	0.20	0.50	ug/l	5.00	97	70-130	0.3	30	
Dichlorodifluoromethane (Freon 12)	4.50	0.45	0.50	ug/l	5.00	90	70-130	4	30	
Di-isopropyl ether	19.1	1.1	2.0	ug/l	20.0	96	70-130	3	30	
Ethyl tert-butyl ether	19.6	1.0	2.0	ug/l	20.0	98	70-130	5	30	
Ethylbenzene	4.68	0.21	0.50	ug/l	5.00	94	70-130	1	30	
Freon 113	4.55	1.5	5.0	ug/l	5.00	91	70-130	3	30	J
Hexachlorobutadiene	4.92	0.40	0.50	ug/l	5.00	98	70-130	3	30	
Isopropylbenzene	4.59	0.18	0.50	ug/l	5.00	92	70-130	2	30	
m,p-Xylene	4.69	0.33	0.50	ug/l	5.00	94	70-130	1	30	
m-Dichlorobenzene	4.72	0.14	0.50	ug/l	5.00	94	70-130	3	30	
Methyl tert-butyl ether (MTBE)	20.2	0.94	2.0	ug/l	20.0	101	70-130	5	30	
Methylene chloride	4.41	0.30	0.50	ug/l	5.00	88	70-130	3	30	
Naphthalene	4.52	0.35	0.50	ug/l	5.00	90	70-130	1	30	
n-Butylbenzene	4.66	0.29	0.50	ug/l	5.00	93	70-130	4	30	
n-Propylbenzene	4.56	0.18	0.50	ug/l	5.00	91	70-130	3	30	
o-Dichlorobenzene	4.86	0.19	0.50	ug/l	5.00	97	70-130	0.1	30	
o-Xylene	4.68	0.20	0.50	ug/l	5.00	94	70-130	1	30	
p-Dichlorobenzene	4.92	0.18	0.50	ug/l	5.00	98	70-130	2	30	
p-Isopropyltoluene	4.56	0.25	0.50	ug/l	5.00	91	70-130	2	30	
sec-Butylbenzene	4.48	0.24	0.50	ug/l	5.00	90	70-130	5	30	
Styrene	4.89	0.19	0.50	ug/l	5.00	98	70-130	1	30	
Tert-amyl methyl ether	20.7	0.59	2.0	ug/l	20.0	104	70-130	6	30	
tert-Butylbenzene	4.64	0.18	0.50	ug/l	5.00	93	70-130	4	30	
Tetrachloroethene	4.80	0.18	0.50	ug/l	5.00	96	70-130	2	30	
Toluene	4.48	0.29	0.50	ug/l	5.00	90	70-130	3	30	
trans-1,2-Dichloroethene	4.58	0.26	0.50	ug/l	5.00	92	70-130	3	30	
trans-1,3-Dichloropropene	4.81	0.32	0.50	ug/l	5.00	96	70-130	5	30	
Trichloroethene	4.83	0.18	0.50	ug/l	5.00	97	70-130	3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)											
LCS Dup (W4B1932-BSD1)											
					Prepared: 02/23/24 Analyzed: 02/24/24						
Trichlorofluoromethane	4.62	0.18	0.50	ug/l	5.00		92	70-130	4	30	
Vinyl chloride	4.35	0.18	0.50	ug/l	5.00		87	70-130	4	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	46.8			ug/l	50.0		94	70-130			
4-Bromofluorobenzene	46.0			ug/l	50.0		92	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:52

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # 4812120

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005 - COPCs		ANALYSES REQUESTED								SPECIAL HANDLING		
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: (213) 271-2237 ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA							<input type="checkbox"/> Same Day Rush 150%
PROJECT MANAGER Chris Kindle		SAMPLER Windsor Lee												<input type="checkbox"/> 24 Hour Rush 100%
		invoice to Rose Ford, Rford@BrwnCald.com												<input type="checkbox"/> 48-72 Hour Rush 75%
														<input type="checkbox"/> 4 - 5 Day Rush 30%
														<input type="checkbox"/> Rush Extractions 50%
														<input type="checkbox"/> 10 - 15 Business Days
														<input type="checkbox"/> QA/QC Data Package

Charges will apply for weekends/holidays

Method of Shipment:

COMMENTS

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA						
	2/12/24	12:25	grab	AT-GS-1-S4	9	✓	✓	✓	✓						
	2/12/24	12:10	grab	AT-GS-1-S7	9	✓	✓	✓	✓						
	2/12/24	12:10	grab	AT-GS-1-S8 *	9	✓	✓	✓	✓						
	2/12/24	12:18	grab	AT-VV-1-S10	9	✓	✓	✓	✓						
	2/12/24	12:15	grab	AT-VV-1-S10D	9	✓	✓	✓	✓						
	2/12/24	13:30	grab	AT-GAC-1-S11	9	✓	✓	✓	✓						
	2/12/24	13:43	grab	AT-GAC-1-S23	9	✓	✓	✓	✓						
	2/12/24	12:15	grab	AT-RO-1-S14	9	✓	✓	✓	✓						
	2/12/24	12:30	grab	AT-RO-1-S24	9	✓	✓	✓	✓						
	2/12/24	13:05	grab	AT-DEC-1-S18	9	✓	✓	✓	✓						
	2/12/24	12:50	grab	AT-DEC-1-S19	9	✓	✓	✓	✓						
	2/12/24	13:50	grab	AT-RES-1-S22	9	✓	✓	✓	✓						

missing 537

containers - LKA
2/12/24

2/13/2024: Informed client
that bottles were not
received for 537. -kgf

RELINQUISHED BY <i>Wint</i>	DATE / TIME 2/12/24 - 2:25pm	RECEIVED BY <i>Magaly S.</i>	14:25 2-12-24	SAMPLE CONDITION: Actual Temperature: Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>Magaly S</i>	DATE / TIME 2-12-24 17:02	RECEIVED BY <i>[Signature]</i>	2/12/24 1700		
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME	RECEIVED BY <i>[Signature]</i>			

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY
OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at www.wecklabs.com

Clients are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.

Work Orders: 4B12121

Project: COSM 97-005 - COPCs

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 3/08/2024

Received Date: 2/12/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/12/24 with the Chain-of-Custody document. The samples were received in good condition, at 11.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:49

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GAC-1-S11D	Windsor Lee	4B12121-01	Water	02/12/24 12:40	
AT-RES-1-S22	Windsor Lee	4B12121-02	Water	02/12/24 14:00	
AT-GS-1-S4	Windsor Lee	4B12121-03	Water	02/12/24 14:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	✘		
Bromomethane	74-83-9	✘		
Chloroethane	75-00-3	✘		
Di-isopropyl ether	108-20-3	✘		
2-Butanone	78-93-3	✘		
2,2-Dichloropropane	594-20-7	✘		
Bromochloromethane	74-97-5	✘		
1,1-Dichloropropene	563-58-6	✘		
Dibromomethane	74-95-3	✘		
1,3-Dichloropropane	142-28-9	✘		
2-Hexanone	591-78-6	✘		
Bromobenzene	108-86-1	✘		
1,2,3-Trichloropropane	96-18-4	✘		
p-Isopropyltoluene	99-87-6	✘		
Hexachlorobutadiene	87-68-3	✘		
1,3-Dichloropropene, Total	542-75-6	✘		
Acetone	67-64-1	✘		
Acrylonitrile	107-13-1	✘		
EPA 537.1 in Water				
PFHpA	375-85-9	✘		
SRL 524M-TCP in Water				
1,2,3-Trichloropropane	96-18-4		✘	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/08/2024 15:49

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GAC-1-S11D

Sampled: 02/12/24 12:40 by Windsor Lee

4B12121-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B0972	Preparation: EPA 522/SPE		Prepared: 02/13/24 08:09		Analyst: mld		
1,4-Dioxane	1.6	0.028	0.070	ug/l	1	02/14/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	84%	Conc: 8.29	70-130			02/14/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1376	Preparation: EPA 5030B		Prepared: 02/16/24 06:46		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/18/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	02/24/24	
ADONA	ND	0.49	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	02/24/24	
PFBS	ND	0.51	1.8	ng/l	1	02/24/24	
PFDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.58	1.8	ng/l	1	02/24/24	
PFHpA	ND	0.47	1.8	ng/l	1	02/24/24	
PFHxA	ND	0.43	1.8	ng/l	1	02/24/24	
PFHxS	ND	0.52	1.8	ng/l	1	02/24/24	
PFNA	ND	0.46	1.8	ng/l	1	02/24/24	
PFOA	ND	0.59	1.8	ng/l	1	02/24/24	
PFOS	ND	0.47	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.42	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	116%	Conc: 40.8	70-130			02/24/24	
13C2-PFHxA	106%	Conc: 37.2	70-130			02/24/24	
d5-EtFOSAA	104%	Conc: 146	70-130			02/24/24	
HFPO-DA-13C3	101%	Conc: 35.5	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B12121

Page 3 of 17

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S11D

Sampled: 02/12/24 12:40 by Windsor Lee

4B12121-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/24/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/24/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/24/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/24/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/24/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/24/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/24/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/24/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/24/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/24/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/24/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/24/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/24/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/24/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/24/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/24/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/24/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/24/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/24/24	
Acetone	ND	3.1	5.0	ug/l	1	02/24/24	
Benzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/24/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/24/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/24/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/24/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/24/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/24/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/24/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/24/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S11D

Sampled: 02/12/24 12:40 by Windsor Lee

4B12121-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/24/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/24/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/24/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/24/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/24/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/24/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/24/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/24/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/24/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/24/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/24/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/24/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/24/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/24/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/24/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/24/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/24/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/24/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/24/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/24/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/24/24	
Styrene	ND	0.19	0.50	ug/l	1	02/24/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/24/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/24/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
THMs, Total	ND		0.50	ug/l	1	02/24/24	
Toluene	ND	0.29	0.50	ug/l	1	02/24/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/24/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/24/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/24/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/24/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-1-S11D

Sampled: 02/12/24 12:40 by Windsor Lee

4B12121-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B1932		Preparation: EPA 5030B		Prepared: 02/23/24 07:48		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/24/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	76%	Conc: 37.8	70-130			02/24/24	
4-Bromofluorobenzene	77%	Conc: 38.6	70-130			02/24/24	

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/12/24 14:00 by Windsor Lee

4B12121-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B				Instr: TOC02			
Batch ID: W4C0269		Preparation: _NONE (TOC/TOX)		Prepared: 03/05/24 10:46		Analyst: rem	
Total Organic Carbon (TOC)	0.26	0.19	0.30	mg/l	1	03/05/24	J

Sample Results

(Continued)

Sample: AT-GS-1-S4

Sampled: 02/12/24 14:00 by Windsor Lee

4B12121-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B				Instr: TOC02			
Batch ID: W4C0269		Preparation: _NONE (TOC/TOX)		Prepared: 03/05/24 10:46		Analyst: rem	
Total Organic Carbon (TOC)	0.61	0.19	0.30	mg/l	1	03/05/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B0972 - EPA 522											
Blank (W4B0972-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.87			ug/l	10.0		79	70-130			
LCS (W4B0972-BS1)											
1,4-Dioxane	0.0345	0.028	0.070	ug/l	0.0600		58	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.70			ug/l	10.0		77	70-130			
LCS Dup (W4B0972-BSD1)											
1,4-Dioxane	0.0367	0.028	0.070	ug/l	0.0600		61	50-150	6	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.89			ug/l	10.0		79	70-130			

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0269 - SM 5310B											
Blank (W4C0269-BLK1)											
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							
LCS (W4C0269-BS1)											
Total Organic Carbon (TOC)	1.05	0.19	0.30	mg/l	1.00		105	85-115			
Matrix Spike (W4C0269-MS1)											
Total Organic Carbon (TOC)	9.80	0.19	0.30	mg/l	5.00	4.98	96	76-115			
Matrix Spike Dup (W4C0269-MSD1)											
Total Organic Carbon (TOC)	9.39	0.19	0.30	mg/l	5.00	4.98	88	76-115	4	20	

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1376 - SRL 524M-TCP											
Blank (W4B1376-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W4B1376-BS1)											
1,2,3-Trichloropropane	0.0211	0.0012	0.0050	ug/l	0.0200		106	80-120			
LCS Dup (W4B1376-BSD1)											
1,2,3-Trichloropropane	0.0229	0.0012	0.0050	ug/l	0.0200		114	80-120	8	20	
Duplicate (W4B1376-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1545 - EPA 537.1											
Blank (W4B1545-BLK1)						Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	ND	0.56	2.0	ng/l							
9CI-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							
PFHpA	ND	0.53	2.0	ng/l							
PFHxA	ND	0.49	2.0	ng/l							
PFHxS	ND	0.59	2.0	ng/l							
PFNA	ND	0.52	2.0	ng/l							
PFOA	ND	0.67	2.0	ng/l							
PFOS	ND	0.53	2.0	ng/l							
PFTeDA	ND	0.45	2.0	ng/l							
PFTrDA	ND	0.42	2.0	ng/l							
PFUnA	ND	0.48	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-PFDA	45.4			ng/l	40.0		113	70-130			
13C2-PFHxA	43.9			ng/l	40.0		110	70-130			
d5-EtFOSAA	166			ng/l	160		103	70-130			
HFPO-DA-13C3	42.0			ng/l	40.0		105	70-130			
LCS (W4B1545-BS1)						Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	17.4	0.56	2.0	ng/l	20.0		87	70-130			
9CI-PF3ONS	17.1	0.53	2.0	ng/l	20.0		86	70-130			
ADONA	18.9	0.55	2.0	ng/l	20.0		94	70-130			
EtFOSAA	17.7	0.48	2.0	ng/l	20.0		89	70-130			
HFPO-DA	18.4	0.87	2.0	ng/l	20.0		92	70-130			
MeFOSAA	17.2	0.58	2.0	ng/l	20.0		86	70-130			
PFBS	19.4	0.58	2.0	ng/l	20.0		97	70-130			
PFDA	18.0	0.45	2.0	ng/l	20.0		90	70-130			
PFDoA	19.1	0.66	2.0	ng/l	20.0		96	70-130			
PFHpA	19.4	0.53	2.0	ng/l	20.0		97	70-130			
PFHxA	19.3	0.49	2.0	ng/l	20.0		97	70-130			
PFHxS	18.4	0.59	2.0	ng/l	20.0		92	70-130			
PFNA	19.7	0.52	2.0	ng/l	20.0		98	70-130			
PFOA	19.3	0.67	2.0	ng/l	20.0		96	70-130			
PFOS	18.5	0.53	2.0	ng/l	20.0		92	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1545 - EPA 537.1 (Continued)										
LCS (W4B1545-BS1)					Prepared: 02/20/24 Analyzed: 02/24/24					
PFTeDA	18.7	0.45	2.0	ng/l	20.0		94 70-130			
PFTTrDA	17.6	0.42	2.0	ng/l	20.0		88 70-130			
PFUnA	18.4	0.48	2.0	ng/l	20.0		92 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	44.9			ng/l	40.0		112 70-130			
13C2-PFHxA	43.3			ng/l	40.0		108 70-130			
d5-EtFOSAA	164			ng/l	160		103 70-130			
HFPO-DA-13C3	41.7			ng/l	40.0		104 70-130			
LCS Dup (W4B1545-BSD1)					Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	17.6	0.56	2.0	ng/l	20.0		88 70-130	1	30	
9CI-PF3ONS	17.6	0.53	2.0	ng/l	20.0		88 70-130	3	30	
ADONA	18.6	0.55	2.0	ng/l	20.0		93 70-130	2	30	
EtFOSAA	17.5	0.48	2.0	ng/l	20.0		88 70-130	1	30	
HFPO-DA	17.3	0.87	2.0	ng/l	20.0		86 70-130	6	30	
MeFOSAA	16.7	0.58	2.0	ng/l	20.0		83 70-130	3	30	
PFBS	19.1	0.58	2.0	ng/l	20.0		95 70-130	2	30	
PFDA	18.2	0.45	2.0	ng/l	20.0		91 70-130	0.7	30	
PFDoA	19.2	0.66	2.0	ng/l	20.0		96 70-130	0.6	30	
PFHpA	19.0	0.53	2.0	ng/l	20.0		95 70-130	2	30	
PFHxA	19.0	0.49	2.0	ng/l	20.0		95 70-130	2	30	
PFHxS	18.1	0.59	2.0	ng/l	20.0		90 70-130	2	30	
PFNA	20.0	0.52	2.0	ng/l	20.0		100 70-130	2	30	
PFOA	19.2	0.67	2.0	ng/l	20.0		96 70-130	0.2	30	
PFOS	18.4	0.53	2.0	ng/l	20.0		92 70-130	0.2	30	
PFTeDA	17.9	0.45	2.0	ng/l	20.0		89 70-130	5	30	
PFTTrDA	18.0	0.42	2.0	ng/l	20.0		90 70-130	2	30	
PFUnA	18.6	0.48	2.0	ng/l	20.0		93 70-130	1	30	
<i>Surrogate(s)</i>										
13C2-PFDA	47.5			ng/l	40.0		119 70-130			
13C2-PFHxA	44.1			ng/l	40.0		110 70-130			
d5-EtFOSAA	166			ng/l	160		104 70-130			
HFPO-DA-13C3	42.1			ng/l	40.0		105 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2											
Blank (W4B1932-BLK1)						Prepared: 02/23/24 Analyzed: 02/24/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)											
Blank (W4B1932-BLK1)						Prepared: 02/23/24 Analyzed: 02/24/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.1			ug/l	50.0		80	70-130			
4-Bromofluorobenzene	41.0			ug/l	50.0		82	70-130			
LCS (W4B1932-BS1)						Prepared: 02/23/24 Analyzed: 02/24/24					
1,1,1,2-Tetrachloroethane	4.95	0.24	0.50	ug/l	5.00		99	70-130			
1,1,1-Trichloroethane	4.83	0.26	0.50	ug/l	5.00		97	70-130			
1,1,2,2-Tetrachloroethane	4.53	0.20	0.50	ug/l	5.00		91	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)											
LCS (W4B1932-BS1)						Prepared: 02/23/24 Analyzed: 02/24/24					
1,1,2-Trichloroethane	4.79	0.19	0.50	ug/l	5.00	96	70-130				
1,1-Dichloroethane	4.79	0.27	0.50	ug/l	5.00	96	70-130				
1,1-Dichloroethene	4.60	0.16	0.50	ug/l	5.00	92	70-130				
1,1-Dichloropropene	4.67	0.14	0.50	ug/l	5.00	93	70-130				
1,2,3-Trichlorobenzene	4.95	0.40	0.50	ug/l	5.00	99	70-130				
1,2,3-Trichloropropane	4.92	0.22	0.50	ug/l	5.00	98	70-130				
1,2,4-Trichlorobenzene	4.93	0.17	0.50	ug/l	5.00	99	70-130				
1,2,4-Trimethylbenzene	4.70	0.20	0.50	ug/l	5.00	94	70-130				
1,2-Dichloroethane	4.77	0.24	0.50	ug/l	5.00	95	70-130				
1,2-Dichloropropane	4.73	0.13	0.50	ug/l	5.00	95	70-130				
1,3,5-Trimethylbenzene	4.76	0.17	0.50	ug/l	5.00	95	70-130				
1,3-Dichloropropane	4.94	0.27	0.50	ug/l	5.00	99	70-130				
2,2-Dichloropropane	3.94	0.17	0.50	ug/l	5.00	79	70-130				
2-Butanone	4.40	1.5	5.0	ug/l	5.00	88	70-130				J
2-Chlorotoluene	5.08	0.15	0.50	ug/l	5.00	102	70-130				
2-Hexanone	4.85	1.2	5.0	ug/l	5.00	97	70-130				J
4-Chlorotoluene	5.00	0.15	0.50	ug/l	5.00	100	70-130				
4-Methyl-2-pentanone	4.75	1.8	5.0	ug/l	5.00	95	70-130				J
Acetone	44.7	3.1	5.0	ug/l	50.0	89	70-130				
Benzene	4.89	0.15	0.50	ug/l	5.00	98	70-130				
Bromobenzene	4.92	0.15	0.50	ug/l	5.00	98	70-130				
Bromochloromethane	4.57	0.15	0.50	ug/l	5.00	91	70-130				
Bromodichloromethane	4.67	0.24	0.50	ug/l	5.00	93	70-130				
Bromoform	5.00	0.38	0.50	ug/l	5.00	100	70-130				
Bromomethane	4.60	0.27	0.50	ug/l	5.00	92	70-130				
Carbon Disulfide	4.51	0.25	0.50	ug/l	5.00	90	70-130				
Carbon tetrachloride	4.99	0.27	0.50	ug/l	5.00	100	70-130				
Chlorobenzene	5.08	0.15	0.50	ug/l	5.00	102	70-130				
Chloroethane	4.63	0.17	0.50	ug/l	5.00	93	70-130				
Chloroform	4.74	0.27	0.50	ug/l	5.00	95	70-130				
Chloromethane	4.74	0.23	0.50	ug/l	5.00	95	70-130				
cis-1,2-Dichloroethene	4.60	0.25	0.50	ug/l	5.00	92	70-130				
cis-1,3-Dichloropropene	4.76	0.30	0.50	ug/l	5.00	95	70-130				
Dibromochloromethane	4.96	0.20	0.50	ug/l	5.00	99	70-130				
Dibromomethane	4.85	0.20	0.50	ug/l	5.00	97	70-130				
Dichlorodifluoromethane (Freon 12)	4.67	0.45	0.50	ug/l	5.00	93	70-130				
Di-isopropyl ether	18.5	1.1	2.0	ug/l	20.0	93	70-130				
Ethyl tert-butyl ether	18.6	1.0	2.0	ug/l	20.0	93	70-130				
Ethylbenzene	4.74	0.21	0.50	ug/l	5.00	95	70-130				

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)											
LCS (W4B1932-BS1)						Prepared: 02/23/24 Analyzed: 02/24/24					
Freon 113	4.69	1.5	5.0	ug/l	5.00		94	70-130			J
Hexachlorobutadiene	5.09	0.40	0.50	ug/l	5.00		102	70-130			
Isopropylbenzene	4.68	0.18	0.50	ug/l	5.00		94	70-130			
m,p-Xylene	4.74	0.33	0.50	ug/l	5.00		95	70-130			
m-Dichlorobenzene	4.85	0.14	0.50	ug/l	5.00		97	70-130			
Methyl tert-butyl ether (MTBE)	19.2	0.94	2.0	ug/l	20.0		96	70-130			
Methylene chloride	4.29	0.30	0.50	ug/l	5.00		86	70-130			
Naphthalene	4.59	0.35	0.50	ug/l	5.00		92	70-130			
n-Butylbenzene	4.87	0.29	0.50	ug/l	5.00		97	70-130			
n-Propylbenzene	4.68	0.18	0.50	ug/l	5.00		94	70-130			
o-Dichlorobenzene	4.87	0.19	0.50	ug/l	5.00		97	70-130			
o-Xylene	4.74	0.20	0.50	ug/l	5.00		95	70-130			
p-Dichlorobenzene	5.00	0.18	0.50	ug/l	5.00		100	70-130			
p-Isopropyltoluene	4.65	0.25	0.50	ug/l	5.00		93	70-130			
sec-Butylbenzene	4.71	0.24	0.50	ug/l	5.00		94	70-130			
Styrene	4.94	0.19	0.50	ug/l	5.00		99	70-130			
Tert-amyl methyl ether	19.5	0.59	2.0	ug/l	20.0		98	70-130			
tert-Butylbenzene	4.81	0.18	0.50	ug/l	5.00		96	70-130			
Tetrachloroethene	4.90	0.18	0.50	ug/l	5.00		98	70-130			
Toluene	4.61	0.29	0.50	ug/l	5.00		92	70-130			
trans-1,2-Dichloroethene	4.74	0.26	0.50	ug/l	5.00		95	70-130			
trans-1,3-Dichloropropene	4.59	0.32	0.50	ug/l	5.00		92	70-130			
Trichloroethene	4.97	0.18	0.50	ug/l	5.00		99	70-130			
Trichlorofluoromethane	4.79	0.18	0.50	ug/l	5.00		96	70-130			
Vinyl chloride	4.54	0.18	0.50	ug/l	5.00		91	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	46.7			ug/l	50.0		93	70-130			
4-Bromofluorobenzene	44.1			ug/l	50.0		88	70-130			
LCS Dup (W4B1932-BSD1)						Prepared: 02/23/24 Analyzed: 02/24/24					
1,1,1,2-Tetrachloroethane	4.95	0.24	0.50	ug/l	5.00		99	70-130	0.06	30	
1,1,1-Trichloroethane	4.70	0.26	0.50	ug/l	5.00		94	70-130	3	30	
1,1,2,2-Tetrachloroethane	4.75	0.20	0.50	ug/l	5.00		95	70-130	5	30	
1,1,2-Trichloroethane	4.83	0.19	0.50	ug/l	5.00		97	70-130	0.9	30	
1,1-Dichloroethane	4.72	0.27	0.50	ug/l	5.00		94	70-130	2	30	
1,1-Dichloroethene	4.48	0.16	0.50	ug/l	5.00		90	70-130	3	30	
1,1-Dichloropropene	4.53	0.14	0.50	ug/l	5.00		91	70-130	3	30	
1,2,3-Trichlorobenzene	4.84	0.40	0.50	ug/l	5.00		97	70-130	2	30	
1,2,3-Trichloropropane	4.90	0.22	0.50	ug/l	5.00		98	70-130	0.3	30	
1,2,4-Trichlorobenzene	4.88	0.17	0.50	ug/l	5.00		98	70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)											
LCS Dup (W4B1932-BSD1)											
					Prepared: 02/23/24 Analyzed: 02/24/24						
1,2,4-Trimethylbenzene	4.62	0.20	0.50	ug/l	5.00	92	70-130	2	30		
1,2-Dichloroethane	4.78	0.24	0.50	ug/l	5.00	96	70-130	0.1	30		
1,2-Dichloropropane	4.64	0.13	0.50	ug/l	5.00	93	70-130	2	30		
1,3,5-Trimethylbenzene	4.65	0.17	0.50	ug/l	5.00	93	70-130	2	30		
1,3-Dichloropropane	5.08	0.27	0.50	ug/l	5.00	102	70-130	3	30		
2,2-Dichloropropane	4.09	0.17	0.50	ug/l	5.00	82	70-130	4	30		
2-Butanone	4.49	1.5	5.0	ug/l	5.00	90	70-130	2	30		J
2-Chlorotoluene	5.03	0.15	0.50	ug/l	5.00	101	70-130	1	30		
2-Hexanone	4.73	1.2	5.0	ug/l	5.00	95	70-130	3	30		J
4-Chlorotoluene	4.94	0.15	0.50	ug/l	5.00	99	70-130	1	30		
4-Methyl-2-pentanone	4.76	1.8	5.0	ug/l	5.00	95	70-130	0.2	30		J
Acetone	48.4	3.1	5.0	ug/l	50.0	97	70-130	8	30		
Benzene	4.81	0.15	0.50	ug/l	5.00	96	70-130	2	30		
Bromobenzene	4.91	0.15	0.50	ug/l	5.00	98	70-130	0.3	30		
Bromochloromethane	4.69	0.15	0.50	ug/l	5.00	94	70-130	2	30		
Bromodichloromethane	4.63	0.24	0.50	ug/l	5.00	93	70-130	0.9	30		
Bromoform	5.09	0.38	0.50	ug/l	5.00	102	70-130	2	30		
Bromomethane	4.53	0.27	0.50	ug/l	5.00	91	70-130	1	30		
Carbon Disulfide	4.49	0.25	0.50	ug/l	5.00	90	70-130	0.5	30		
Carbon tetrachloride	4.75	0.27	0.50	ug/l	5.00	95	70-130	5	30		
Chlorobenzene	5.09	0.15	0.50	ug/l	5.00	102	70-130	0.2	30		
Chloroethane	4.40	0.17	0.50	ug/l	5.00	88	70-130	5	30		
Chloroform	4.71	0.27	0.50	ug/l	5.00	94	70-130	0.7	30		
Chloromethane	4.51	0.23	0.50	ug/l	5.00	90	70-130	5	30		
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00	91	70-130	1	30		
cis-1,3-Dichloropropene	4.89	0.30	0.50	ug/l	5.00	98	70-130	3	30		
Dibromochloromethane	4.88	0.20	0.50	ug/l	5.00	98	70-130	2	30		
Dibromomethane	4.83	0.20	0.50	ug/l	5.00	97	70-130	0.3	30		
Dichlorodifluoromethane (Freon 12)	4.50	0.45	0.50	ug/l	5.00	90	70-130	4	30		
Di-isopropyl ether	19.1	1.1	2.0	ug/l	20.0	96	70-130	3	30		
Ethyl tert-butyl ether	19.6	1.0	2.0	ug/l	20.0	98	70-130	5	30		
Ethylbenzene	4.68	0.21	0.50	ug/l	5.00	94	70-130	1	30		
Freon 113	4.55	1.5	5.0	ug/l	5.00	91	70-130	3	30		J
Hexachlorobutadiene	4.92	0.40	0.50	ug/l	5.00	98	70-130	3	30		
Isopropylbenzene	4.59	0.18	0.50	ug/l	5.00	92	70-130	2	30		
m,p-Xylene	4.69	0.33	0.50	ug/l	5.00	94	70-130	1	30		
m-Dichlorobenzene	4.72	0.14	0.50	ug/l	5.00	94	70-130	3	30		
Methyl tert-butyl ether (MTBE)	20.2	0.94	2.0	ug/l	20.0	101	70-130	5	30		
Methylene chloride	4.41	0.30	0.50	ug/l	5.00	88	70-130	3	30		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:49

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1932 - EPA 524.2 (Continued)										
LCS Dup (W4B1932-BSD1)					Prepared: 02/23/24 Analyzed: 02/24/24					
Naphthalene	4.52	0.35	0.50	ug/l	5.00	90	70-130	1	30	
n-Butylbenzene	4.66	0.29	0.50	ug/l	5.00	93	70-130	4	30	
n-Propylbenzene	4.56	0.18	0.50	ug/l	5.00	91	70-130	3	30	
o-Dichlorobenzene	4.86	0.19	0.50	ug/l	5.00	97	70-130	0.1	30	
o-Xylene	4.68	0.20	0.50	ug/l	5.00	94	70-130	1	30	
p-Dichlorobenzene	4.92	0.18	0.50	ug/l	5.00	98	70-130	2	30	
p-Isopropyltoluene	4.56	0.25	0.50	ug/l	5.00	91	70-130	2	30	
sec-Butylbenzene	4.48	0.24	0.50	ug/l	5.00	90	70-130	5	30	
Styrene	4.89	0.19	0.50	ug/l	5.00	98	70-130	1	30	
Tert-amyl methyl ether	20.7	0.59	2.0	ug/l	20.0	104	70-130	6	30	
tert-Butylbenzene	4.64	0.18	0.50	ug/l	5.00	93	70-130	4	30	
Tetrachloroethene	4.80	0.18	0.50	ug/l	5.00	96	70-130	2	30	
Toluene	4.48	0.29	0.50	ug/l	5.00	90	70-130	3	30	
trans-1,2-Dichloroethene	4.58	0.26	0.50	ug/l	5.00	92	70-130	3	30	
trans-1,3-Dichloropropene	4.81	0.32	0.50	ug/l	5.00	96	70-130	5	30	
Trichloroethene	4.83	0.18	0.50	ug/l	5.00	97	70-130	3	30	
Trichlorofluoromethane	4.62	0.18	0.50	ug/l	5.00	92	70-130	4	30	
Vinyl chloride	4.35	0.18	0.50	ug/l	5.00	87	70-130	4	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	46.8			ug/l	50.0	94	70-130			
4-Bromofluorobenzene	46.0			ug/l	50.0	92	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:49

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue ; Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # 4P12121

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles	PROJECT: COSM 97-005 - COPCs	ANALYSES REQUESTED					SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018	PHONE: (213) 271-2237 ckindle@BrwnCald.com	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	5310 B TOC	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindle	SAMPLER Windsor Lee	invoice to Rose Ford, Rford@BrwnCald.com					Charges will apply for weekends/holidays	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	5310 B TOC	COMMENTS
	2/12/24	12:40	grab	AT-GAC-1-SID	9	✓	✓	✓	✓		
	2/12/24	17:00	sm	AT-RES-1-S22	3					✓	
	2/12/24	14:00	grab	AT-GS-1-S4	3					✓	

RELINQUISHED BY <i>Went</i>	DATE / TIME 2/12/24 - 2:25 pm	RECEIVED BY <i>Magalys</i>	14:25 2-12-24	SAMPLE CONDITION: Actual Temperature: 11.5 Received On Ice Preserved <input checked="" type="checkbox"/> Evidence Seals Present <input checked="" type="checkbox"/> Container Attacked <input type="checkbox"/> Preserved at Lab <input type="checkbox"/>	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>Magalys</i>	DATE / TIME 2-12-24 17:03	RECEIVED BY <i>[Signature]</i>	2-12-24 17:00		
RELINQUISHED BY	DATE / TIME	RECEIVED BY			



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **4B12121**

Date/Time Received: **02/12/24 @ 17:00**

WKO Logged by: **Lester Abad**

of Samples: **03**

Samples Checked by: **Lester Abad**

Delivered by: **Client**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC				
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		11.5°C
Ice Type (Blue/Wet)				WET
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment)				
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH verified upon receipt?				
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 67108<2, 608.3.5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free Chlorine Tested <0.1 (Organics Analyses)				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
OR&G pH <2 verified?				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
pH adjusted for OR&G				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Project Manager notified about sample preservation?				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Lester Abad*

Date: **02/12/24**

Work Orders: 4B13136

Project: City of Santa Monica - 97-005 - DDW Standards

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 4/04/2024

Received Date: 2/13/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

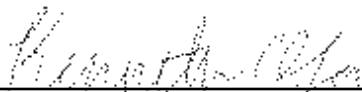
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/13/24 with the Chain-of-Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-2-S22	Windsor Lee	4B13136-01	Water	02/13/24 12:30	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 1613B in Water				
2,3,7,8-TCDD (Dioxin)	1746-01-6		⊗	
EPA 508.1 in Water				
Aldrin	309-00-2	⊗		⊗
alpha-BHC	319-84-6	⊗		⊗
beta-BHC	319-85-7	⊗		⊗
delta-BHC	319-86-8	⊗		⊗
gamma-BHC (Lindane)	58-89-9			⊗
4,4'-DDD	72-54-8	⊗		⊗
4,4'-DDE	72-55-9	⊗		⊗
4,4'-DDT	50-29-3	⊗		⊗
Dieldrin	60-57-1	⊗		⊗
Endosulfan I	959-98-8	⊗		⊗
Endosulfan II	33213-65-9	⊗		⊗
Endosulfan sulfate	1031-07-8	⊗		⊗
Endrin aldehyde	7421-93-4	⊗		⊗
Chlorothalonil	1897-45-6	⊗	⊗	⊗
Trifluralin	1582-09-8	⊗		⊗
Toxaphene	8001-35-2			⊗
PCBs, Total				⊗
EPA 515.4 in Water				
3,5-Dichlorobenzoic acid	51-36-5	⊗		⊗
Dichloroprop	120-36-5	⊗		⊗
2,4,5-T	93-76-5	⊗		⊗
2,4-DB	94-82-6	⊗		⊗
DCPA	1861-32-1	⊗		⊗
Acifluorfen	50594-66-6	⊗		⊗
Chloramben	133-90-4	⊗	⊗	⊗
EPA 525.2 in Water				
Bromacil	314-40-9	⊗		⊗
Captan	133-06-2	⊗	⊗	⊗
Chlorpropham	101-21-3	⊗		⊗
Diazinon	333-41-5	⊗		⊗
Dimethoate	60-51-5	⊗	⊗	⊗
Diphenamid	957-51-7	⊗		⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
 Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:30

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 525.2 in Water (Continued)				
Disulfoton	298-04-4	⊗		⊗
EPTC	759-94-4	⊗		⊗
Metolachlor	51218-45-2	⊗		⊗
Metribuzin	21087-64-9	⊗		⊗
Prometryn	7287-19-6	⊗		⊗
Terbacil	5902-51-2	⊗		⊗
Trithion	786-19-6	⊗	⊗	⊗
EPA 531.2 in Water				
Propoxur (Baygon)	114-26-1	⊗		⊗
Methiocarb	2032-65-7	⊗		⊗
EPA 8015B in Water				
Ethylene glycol	107-21-1	⊗		⊗
EPA 900.0 in Water				
Gross Beta			⊗	
SM 7110C in Water				
Gross Alpha			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Sample Results

Sample: AT-RES-2-S22

Sampled: 02/13/24 12:30 by Windsor Lee

4B13136-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Carbamates and Urea Pesticides							
Method: EPA 531.2				Instr: LC11			
Batch ID: W4B1781		Preparation: _NONE (LC)		Prepared: 02/21/24 18:38		Analyst: cam	
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l	1	02/23/24	
Aldicarb	ND	0.58	2.0	ug/l	1	02/23/24	
Aldicarb sulfone	ND	0.73	2.0	ug/l	1	02/23/24	
Aldicarb sulfoxide	ND	1.0	2.0	ug/l	1	02/23/24	
Carbaryl	ND	1.0	2.0	ug/l	1	02/23/24	
Carbofuran	ND	1.0	2.0	ug/l	1	02/23/24	
Methiocarb	ND	1.0	2.0	ug/l	1	02/23/24	
Methomyl	ND	1.3	2.0	ug/l	1	02/23/24	
Oxamyl	ND	1.1	2.0	ug/l	1	02/23/24	
Propoxur (Baygon)	ND	1.4	2.0	ug/l	1	02/23/24	
<i>Surrogate(s)</i>							
BDMC	106%	Conc: 10.6	70-130			02/23/24	

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.4				Instr: GC08			
Batch ID: W4B1069		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/14/24 08:21		Analyst: alf	
2,4,5-T	ND	0.065	0.20	ug/l	1	02/24/24	
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l	1	02/24/24	
2,4-D	ND	0.14	0.40	ug/l	1	02/24/24	
2,4-DB	ND	0.19	2.0	ug/l	1	02/24/24	
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l	1	02/24/24	
Acifluorfen	ND	0.030	0.40	ug/l	1	02/24/24	
Bentazon	ND	0.23	2.0	ug/l	1	02/24/24	
Dalapon	ND	0.11	0.40	ug/l	1	02/24/24	
DCPA	ND	0.029	0.10	ug/l	1	02/24/24	
Dicamba	ND	0.15	0.60	ug/l	1	02/24/24	
Dichloroprop	ND	0.12	0.30	ug/l	1	02/24/24	
Dinoseb	ND	0.033	0.40	ug/l	1	02/24/24	
Pentachlorophenol	ND	0.014	0.20	ug/l	1	02/24/24	
Picloram	ND	0.050	0.60	ug/l	1	02/24/24	
<i>Surrogate(s)</i>							
2,4-DCAA	43%	Conc: 4.35	70-130			02/24/24	S-04

Chlorinated Pesticides and/or PCBs by GC/ECD

Method: EPA 508.1				Instr: GC08			
Batch ID: W4B2148		Preparation: EPA 508.1/SPE		Prepared: 02/27/24 07:33		Analyst: alf	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	03/09/24	

4B13136

Page 4 of 27

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Sample Results

(Continued)

Sample: AT-RES-2-S22

Sampled: 02/13/24 12:30 by Windsor Lee

4B13136-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1

Instr: GC08

Batch ID: W4B2148

Preparation: EPA 508.1/SPE

Prepared: 02/27/24 07:33

Analyst: alf

4,4'-DDE	ND	0.0040	0.010	ug/l	1	03/09/24	Q-01
4,4'-DDT	ND	0.0030	0.010	ug/l	1	03/09/24	
Aldrin	ND	0.0040	0.010	ug/l	1	03/09/24	Q-01
alpha-BHC	ND	0.0015	0.010	ug/l	1	03/09/24	
Aroclor 1016	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1221	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1232	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1242	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1248	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1254	ND	0.10	0.10	ug/l	1	03/09/24	
Aroclor 1260	ND	0.10	0.10	ug/l	1	03/09/24	
beta-BHC	ND	0.010	0.010	ug/l	1	03/09/24	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	03/09/24	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	03/09/24	
delta-BHC	ND	0.0030	0.010	ug/l	1	03/09/24	
Dieldrin	ND	0.0030	0.010	ug/l	1	03/09/24	
Endosulfan I	ND	0.0030	0.010	ug/l	1	03/09/24	BS-04
Endosulfan II	ND	0.0019	0.010	ug/l	1	03/09/24	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	03/09/24	BS-04
Endrin	ND	0.0030	0.010	ug/l	1	03/09/24	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	03/09/24	Q-01
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	03/09/24	
Heptachlor	ND	0.0031	0.010	ug/l	1	03/09/24	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	03/09/24	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	03/09/24	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	03/09/24	
Methoxychlor	ND	0.0030	0.010	ug/l	1	03/09/24	
PCBs, Total	ND	0.10	0.50	ug/l	1	03/09/24	
Propachlor	ND	0.045	0.20	ug/l	1	03/09/24	
Toxaphene	ND	0.37	1.0	ug/l	1	03/09/24	
Trifluralin	ND	0.0043	0.010	ug/l	1	03/09/24	

Surrogate(s)

4,4-Dibromobiphenyl	86% Conc: 0.0859	70-130	03/09/24
---------------------	------------------	--------	----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Sample Results

(Continued)

Sample: AT-RES-2-S22

Sampled: 02/13/24 12:30 by Windsor Lee

4B13136-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: EPA 335.4				Instr: AA01			
Batch ID: W4B1613		Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 19:10		Analyst: kac	
Cyanide, Total	3.5	1.5	5.0	ug/l	1	02/24/24	J
Diquat and Paraquat by EPA 549.2							
Method: EPA 549.2				Instr: LC10			
Batch ID: W4B1161		Preparation: EPA 549.2/SPE		Prepared: 02/15/24 07:03		Analyst: cam	
Diquat	ND	1.2	4.0	ug/l	1	02/21/24	
Endothall By EPA 548.1							
Method: EPA 548.1				Instr: GCMS06			
Batch ID: W4B1095		Preparation: EPA 548.1/SPE		Prepared: 02/14/24 07:39		Analyst: rmr	
Endothall	ND	11	45	ug/l	1	02/22/24	
Glycols by GC/FID							
Method: EPA 8015B				Instr: GC09			
Batch ID: W4B2168		Preparation: _NONE (SVOC)		Prepared: 02/27/24 10:04		Analyst: alf	
Ethylene glycol	ND	4.7	10	mg/l	1	02/27/24	O-04
<i>Surrogate(s)</i>							
1-Propanol	113%	Conc: 113	50-150			02/27/24	O-04
Glyphosate by EPA 547							
Method: EPA 547				Instr: LC11			
Batch ID: W4B2067		Preparation: _NONE (LC)		Prepared: 02/26/24 08:51		Analyst: cam	
Glyphosate	ND	1.8	5.0	ug/l	1	02/26/24	
Haloacetic Acids (HAAs) by GC/ECD							
Method: EPA 552.3				Instr: GC05			
Batch ID: W4B1492		Preparation: EPA 552.3/Micro Ext. Drtz		Prepared: 02/20/24 07:59		Analyst: ecs	
Dibromoacetic acid (dbaa)	0.65	0.28	1.0	ug/l	1	03/03/24	J
Dichloroacetic acid (dcaa)	0.63	0.29	1.0	ug/l	1	03/03/24	J
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l	1	03/03/24	
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l	1	03/03/24	
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l	1	03/03/24	
<i>Surrogate(s)</i>							
2-Bromobutyric acid	109%	Conc: 10.9	70-130			03/03/24	
Metals by EPA 200 Series Methods							
Method: EPA 245.1				Instr: HG03			
Batch ID: W4B2073		Preparation: EPA 245.1		Prepared: 02/26/24 09:44		Analyst: kjo	
Mercury, Total	ND	0.037	0.050	ug/l	1	02/26/24	
Perchlorate by EPA 314.0							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Sample Results

(Continued)

Sample: AT-RES-2-S22

Sampled: 02/13/24 12:30 by Windsor Lee

4B13136-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Perchlorate by EPA 314.0 (Continued)							
Method: EPA 314.0				Instr: LC08_Channel1			
Batch ID: W4B1575		Preparation: _NONE (LC)		Prepared: 02/20/24 14:02		Analyst: CLL	
Perchlorate	ND	0.26	1.0	ug/l	1	02/21/24	
Radiological Parameters by APHA/EPA Methods							
Method: EPA 900.0				Instr: RAD01			
Batch ID: W4B1906		Preparation: _NONE (RADIOCHEM)		Prepared: 02/22/24 15:16		Analyst: ela	
Gross Beta	0.863			pCi/L	1	03/01/24	
Counting Uncertainty: 0.536		MDA: 0.867					
Method: SM 7110C				Instr: RAD02			
Batch ID: W4C0100		Preparation: _NONE (RADIOCHEM)		Prepared: 03/01/24 17:39		Analyst: ela	
Gross Alpha	0.568			pCi/L	1	03/07/24	
Counting Uncertainty: 0.2		MDA: 0.054					
Semivolatile Organic Compounds by GC/MS							
Method: EPA 525.2				Instr: GCMS16			
Batch ID: W4B2063		Preparation: EPA 525.2/SPE		Prepared: 02/26/24 08:34		Analyst: rmr	
Alachlor	ND	0.063	0.10	ug/l	1	03/23/24	
Atrazine	ND	0.042	0.10	ug/l	1	03/23/24	
Benzo (a) pyrene	ND	0.045	0.10	ug/l	1	03/23/24	
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l	1	03/23/24	
Bis(2-ethylhexyl)phthalate	1.3	0.41	3.0	ug/l	1	03/23/24	J
Bromacil	ND	0.24	0.50	ug/l	1	03/23/24	
Butachlor	ND	0.040	0.10	ug/l	1	03/23/24	
Captan	ND	0.32	1.0	ug/l	1	03/23/24	
Chlorpropham	ND	0.040	0.10	ug/l	1	03/23/24	
Diazinon	ND	0.022	0.10	ug/l	1	03/23/24	
Dimethoate	ND	0.041	0.20	ug/l	1	03/23/24	
Diphenamid	ND	0.030	0.10	ug/l	1	03/23/24	
Disulfoton	ND	0.11	0.20	ug/l	1	03/23/24	
EPTC	ND	0.020	0.10	ug/l	1	03/23/24	
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l	1	03/23/24	
Metolachlor	ND	0.030	0.10	ug/l	1	03/23/24	
Metribuzin	ND	0.030	0.10	ug/l	1	03/23/24	
Molinate	ND	0.030	0.10	ug/l	1	03/23/24	
Prometryn	ND	0.030	0.10	ug/l	1	03/23/24	
Simazine	ND	0.058	0.10	ug/l	1	03/23/24	
Terbacil	ND	0.090	2.0	ug/l	1	03/23/24	
Thiobencarb	ND	0.069	0.10	ug/l	1	03/23/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Sample Results

(Continued)

Sample: AT-RES-2-S22

Sampled: 02/13/24 12:30 by Windsor Lee

4B13136-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Semivolatile Organic Compounds by GC/MS (Continued)							
Method: EPA 525.2			Instr: GCMS16				
Batch ID: W4B2063		Preparation: EPA 525.2/SPE		Prepared: 02/26/24 08:34		Analyst: rmr	
Trithion	ND	0.054	0.10	ug/l	1	03/23/24	
<i>Surrogate(s)</i>							
1,3-Dimethyl-2-nitrobenzene	88%	Conc: 4.18	70-130			03/23/24	
Perylene-d12	94%	Conc: 4.48	50-120			03/23/24	
Triphenyl phosphate	102%	Conc: 4.87	70-130			03/23/24	

Volatile Organics by P&T and GC/MS

Method: EPA 524.3			Instr: GCMS04				
Batch ID: W4B1568		Preparation: Method (P+T)		Prepared: 02/20/24 12:18		Analyst: ADM	
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l	1	02/20/24	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l	1	02/20/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	105%	Conc: 0.422	70-130			02/20/24	
4-Bromofluorobenzene	101%	Conc: 0.405	70-130			02/20/24	

Sample Results

(Continued)

Sample: AT-RES-2-S22

Sampled: 02/13/24 12:30 by Windsor Lee

4B13136-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Semivolatile Organics - Low Level by Tandem GC/MS/MS							
Method: EPA 1613B			Instr: GCMS15				
Batch ID: W4C0610		Preparation: EPA 3510C		Prepared: 03/08/24 07:58		Analyst: AJC	
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	1	03/20/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Sample Results GEL Laboratories, LLC

Sample: AT-RES-2-S22 4B13136-01 (Water) Sampled: 02/13/24 12:30 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 903.1							
Method: EPA 903.1	Batch ID: 2570171	Prepared: 02/26/24 00:00		Analyst: MJ2			
Radium-226	0.302			pCi/L	1	02/26/24	
Uncertainty: 0.212	MDA: 0.208						

EPA 904.0/ EPA 9320							
Method: EPA 904.0/ EPA 9320	Batch ID: 2572441	Prepared: 03/08/24 00:00		Analyst: JE1			
Radium-228	-0.123			pCi/L	1	03/08/24	U
Uncertainty: 0.326	MDA: 0.636						
<i>Surrogate(s)</i>							
<i>Barium Carrier</i>	104%		25-125			03/08/24	
<i>Yttrium Carrier</i>	66%		25-125			03/08/24	

EPA 905.0							
Method: EPA 905.0	Batch ID: 2569265	Prepared: 02/20/24 00:00		Analyst: ST2			
Strontium-90	-0.105			pCi/L	1	02/20/24	U
Uncertainty: 0.677	MDA: 1.18						
<i>Surrogate(s)</i>							
<i>Strontium Carrier</i>	54.6%		25-125			02/20/24	

EPA 906.0							
Method: EPA 906.0	Batch ID: 2573168	Prepared: 03/07/24 00:00		Analyst: HB2			
Tritium	134			pCi/L	1	03/07/24	U
Uncertainty: 358	MDA: 617						

Sample Results LA Testing - EMSL Analytical, Inc. CA-ELAP #2283, Non-NELAP

Sample: AT-RES-2-S22 4B13136-01 (Water) Sampled: 02/13/24 12:30 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 100.2							
Method: EPA 100.2	Batch ID: 322403552	Prepared: 02/14/24 12:10		Analyst: _SUB			
Asbestos	ND		0.20	MFL	1	02/20/24	
Fibers:	Area: 0.0635	Confidence: 0.00-0.75					

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

EPA 903.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2570171 - EPA 903.1										
Blank (1205653358-BLK)										
Radium-226	0.152	1.00	pCi/L				-			U
Uncertainty: 0.172		MDA: 0.267								
Duplicate (1205653359 D)										
Radium-226	0.111	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.128		MDA: 0.185								
Matrix Spike (1205653360 S)										
Radium-226	14.7	1.00	pCi/L	14.5	<	101	80-120			
Uncertainty: 1.59		MDA: 0.466								
BS (1205653361-BKS)										
Radium-226	14.4	1.00	pCi/L	14.5		99.5	90-110			
Uncertainty: 1.42		MDA: 0.254								

Quality Control Results

EPA 904.0/ EPA 9320

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2572441 - EPA 904.0/ EPA 9320										
Blank (1205657868-BLK)										
Radium-228	0.169	1.00	pCi/L				-			U
Uncertainty: 0.291		MDA: 0.508								
Duplicate (1205657869 D)										
Radium-228	-0.116	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.304		MDA: 0.604								
Matrix Spike (1205657870 S)										
Radium-228	15.8	1.00	pCi/L	16.9	<	93.4	70-130			
Uncertainty: 1.24		MDA: 0.683								
BS (1205657871-BKS)										
Radium-228	2.85	1.00	pCi/L	3.37		84.5	80-120			
Uncertainty: 0.592		MDA: 0.574								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

EPA 905.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2569265 - EPA 905.0										
Blank (1205651666-BLK)										
Strontium-90	-0.235	2.00	pCi/L				-			U
Uncertainty: 0.413	MDA: 0.742									
Duplicate (1205651667 D)										
Source: 655486001 Prepared & Analyzed: 02/20/24										
Strontium-90	-0.234	2.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.678	MDA: 1.19									
Matrix Spike (1205651668 S)										
Source: 655486001 Prepared & Analyzed: 02/21/24										
Strontium-90	32.9	2.00	pCi/L	28.1	<	117	80-120			
Uncertainty: 3.97	MDA: 2.96									
BS (1205651669-BKS)										
Prepared & Analyzed: 02/20/24										
Strontium-90	5.71	2.00	pCi/L	5.54		103	90-110			
Uncertainty: 2.02	MDA: 2.70									

Quality Control Results

(Continued)

EPA 906.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573168 - EPA 906.0										
Blank (1205659461-BLK)										
Tritium	33.7	1000	pCi/L				-			U
Uncertainty: 355	MDA: 620									
Duplicate (1205659462 D)										
Source: 655486001 Prepared & Analyzed: 03/07/24										
Tritium	33.2	1000	pCi/L		<		0-20	0	20	U
Uncertainty: 356	MDA: 623									
Matrix Spike (1205659463 S)										
Source: 655486001 Prepared & Analyzed: 03/07/24										
Tritium	10500	1000	pCi/L	12000	<	87.8	80-120			
Uncertainty: 1310	MDA: 1540									
BS (1205659464-BKS)										
Prepared & Analyzed: 03/11/24										
Tritium	4850	1000	pCi/L	4830		100	90-110			
Uncertainty: 623	MDA: 702									

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:30

Quality Control Results (Continued)

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1781 - EPA 531.2										
Blank (W4B1781-BLK1)					Prepared: 02/21/24 Analyzed: 02/23/24					
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l						
Aldicarb	ND	0.58	2.0	ug/l						
Aldicarb sulfone	ND	0.73	2.0	ug/l						
Aldicarb sulfoxide	ND	1.0	2.0	ug/l						
Carbaryl	ND	1.0	2.0	ug/l						
Carbofuran	ND	1.0	2.0	ug/l						
Methiocarb	ND	1.0	2.0	ug/l						
Methomyl	ND	1.3	2.0	ug/l						
Oxamyl	ND	1.1	2.0	ug/l						
Propoxur (Baygon)	ND	1.4	2.0	ug/l						
<i>Surrogate(s)</i>										
BDMC	11.2			ug/l	10.0		112 70-130			
LCS (W4B1781-BS1)					Prepared: 02/21/24 Analyzed: 02/23/24					
3-Hydroxycarbofuran	11.1	0.82	2.0	ug/l	10.0		111 70-130			
Aldicarb	11.4	0.58	2.0	ug/l	10.0		114 70-130			
Aldicarb sulfone	9.68	0.73	2.0	ug/l	10.0		97 70-130			
Aldicarb sulfoxide	10.8	1.0	2.0	ug/l	10.0		108 70-130			
Carbaryl	11.9	1.0	2.0	ug/l	10.0		119 70-130			
Carbofuran	11.8	1.0	2.0	ug/l	10.0		118 70-130			
Methiocarb	11.4	1.0	2.0	ug/l	10.0		114 70-130			
Methomyl	11.2	1.3	2.0	ug/l	10.0		112 70-130			
Oxamyl	10.4	1.1	2.0	ug/l	10.0		104 70-130			
Propoxur (Baygon)	12.7	1.4	2.0	ug/l	10.0		127 70-130			
<i>Surrogate(s)</i>										
BDMC	11.9			ug/l	10.0		119 70-130			
Matrix Spike (W4B1781-MS1)					Source: 4B02005-01 Prepared: 02/21/24 Analyzed: 02/23/24					
3-Hydroxycarbofuran	12.7	0.82	2.0	ug/l	10.0	ND	127 70-130			
Aldicarb	13.0	0.58	2.0	ug/l	10.0	ND	130 70-130			
Aldicarb sulfone	9.22	0.73	2.0	ug/l	10.0	ND	92 70-130			
Aldicarb sulfoxide	11.2	1.0	2.0	ug/l	10.0	ND	112 70-130			
Carbaryl	12.9	1.0	2.0	ug/l	10.0	ND	129 70-130			
Carbofuran	12.6	1.0	2.0	ug/l	10.0	ND	126 70-130			
Methiocarb	12.9	1.0	2.0	ug/l	10.0	ND	129 70-130			
Methomyl	11.7	1.3	2.0	ug/l	10.0	ND	117 70-130			
Oxamyl	10.1	1.1	2.0	ug/l	10.0	ND	101 70-130			
Propoxur (Baygon)	12.5	1.4	2.0	ug/l	10.0	ND	125 70-130			
<i>Surrogate(s)</i>										
BDMC	11.2			ug/l	10.0		112 70-130			
Matrix Spike Dup (W4B1781-MSD1)					Source: 4B02005-01 Prepared: 02/21/24 Analyzed: 02/23/24					
3-Hydroxycarbofuran	14.7	0.82	2.0	ug/l	10.0	ND	147 70-130	15	30	MS-01

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:30

Quality Control Results

(Continued)

Carbamates and Urea Pesticides (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1781 - EPA 531.2 (Continued)											
Matrix Spike Dup (W4B1781-MSD1) Source: 4B02005-01 Prepared: 02/21/24 Analyzed: 02/23/24											
Aldicarb	13.0	0.58	2.0	ug/l	10.0	ND	130	70-130	0.6	30	
Aldicarb sulfone	9.57	0.73	2.0	ug/l	10.0	ND	96	70-130	4	30	
Aldicarb sulfoxide	11.1	1.0	2.0	ug/l	10.0	ND	111	70-130	0.6	30	
Carbaryl	13.0	1.0	2.0	ug/l	10.0	ND	130	70-130	0.4	30	
Carbofuran	12.5	1.0	2.0	ug/l	10.0	ND	125	70-130	0.4	30	
Methiocarb	13.2	1.0	2.0	ug/l	10.0	ND	132	70-130	2	30	MS-01
Methomyl	10.6	1.3	2.0	ug/l	10.0	ND	106	70-130	10	30	
Oxamyl	12.9	1.1	2.0	ug/l	10.0	ND	129	70-130	25	30	
Propoxur (Baygon)	12.6	1.4	2.0	ug/l	10.0	ND	126	70-130	0.7	30	
<i>Surrogate(s)</i>											
BDMC	12.9			ug/l	10.0		129	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1069 - EPA 515.4											
Blank (W4B1069-BLK1)						Prepared: 02/14/24 Analyzed: 02/23/24					
2,4,5-T	ND	0.065	0.20	ug/l							
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l							
2,4-D	ND	0.14	0.40	ug/l							
2,4-DB	ND	0.19	2.0	ug/l							
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l							
Acifluorfen	ND	0.030	0.40	ug/l							
Bentazon	ND	0.23	2.0	ug/l							
Dalapon	ND	0.11	0.40	ug/l							
DCPA	ND	0.029	0.10	ug/l							
Dicamba	ND	0.15	0.60	ug/l							
Dichloroprop	ND	0.12	0.30	ug/l							
Dinoseb	ND	0.033	0.40	ug/l							
Pentachlorophenol	ND	0.014	0.20	ug/l							
Picloram	ND	0.050	0.60	ug/l							
<i>Surrogate(s)</i>											
2,4-DCAA	9.86			ug/l	10.0		99	70-130			
LCS (W4B1069-BS1)						Prepared: 02/14/24 Analyzed: 02/23/24					
2,4,5-T	3.97	0.065	0.20	ug/l	4.00		99	70-130			
2,4,5-TP (Silvex)	4.02	0.026	0.20	ug/l	4.00		101	70-130			
2,4-D	7.74	0.14	0.40	ug/l	8.00		97	70-130			
2,4-DB	15.7	0.19	2.0	ug/l	16.0		98	70-130			
3,5-Dichlorobenzoic acid	7.49	0.12	1.0	ug/l	8.00		94	70-130			
Acifluorfen	4.07	0.030	0.40	ug/l	4.00		102	70-130			
Bentazon	15.9	0.23	2.0	ug/l	16.0		99	70-130			
Dalapon	8.10	0.11	0.40	ug/l	8.00		101	70-130			
DCPA	3.34	0.029	0.10	ug/l	4.00		84	70-130			
Dicamba	8.02	0.15	0.60	ug/l	8.00		100	70-130			
Dichloroprop	8.04	0.12	0.30	ug/l	8.00		101	70-130			
Dinoseb	4.01	0.033	0.40	ug/l	4.00		100	70-130			
Pentachlorophenol	3.98	0.014	0.20	ug/l	4.00		100	70-130			
Picloram	4.07	0.050	0.60	ug/l	4.00		102	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.0			ug/l	10.0		100	70-130			
Matrix Spike (W4B1069-MS1)			Source: 4A22028-03			Prepared: 02/14/24 Analyzed: 02/23/24					
2,4,5-T	4.43	0.065	0.20	ug/l	4.00	ND	111	70-130			
2,4,5-TP (Silvex)	4.18	0.026	0.20	ug/l	4.00	ND	105	70-130			
2,4-D	7.84	0.14	0.40	ug/l	8.00	ND	98	70-130			
2,4-DB	14.8	0.19	2.0	ug/l	16.0	ND	93	70-130			
3,5-Dichlorobenzoic acid	20.5	0.12	1.0	ug/l	8.00	ND	256	70-130			MS-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1069 - EPA 515.4 (Continued)											
Matrix Spike (W4B1069-MS1) Source: 4A22028-03 Prepared: 02/14/24 Analyzed: 02/23/24											
Acifluorfen	4.38	0.030	0.40	ug/l	4.00	ND	110	70-130			
Bentazon	16.3	0.23	2.0	ug/l	16.0	ND	102	70-130			
Dalapon	6.82	0.11	0.40	ug/l	8.00	0.584	78	70-130			
DCPA	4.76	0.029	0.10	ug/l	4.00	0.0354	118	70-130			
Dicamba	7.93	0.15	0.60	ug/l	8.00	ND	99	70-130			
Dichloroprop	7.27	0.12	0.30	ug/l	8.00	ND	91	70-130			
Dinoseb	4.08	0.033	0.40	ug/l	4.00	ND	102	70-130			
Pentachlorophenol	4.01	0.014	0.20	ug/l	4.00	ND	100	70-130			
Picloram	5.18	0.050	0.60	ug/l	4.00	ND	129	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.0			ug/l	10.0		100	70-130			
Matrix Spike Dup (W4B1069-MSD1) Source: 4A22028-03 Prepared: 02/14/24 Analyzed: 02/23/24											
2,4,5-T	4.39	0.065	0.20	ug/l	4.00	ND	110	70-130	1	30	
2,4,5-TP (Silvex)	4.10	0.026	0.20	ug/l	4.00	ND	102	70-130	2	30	
2,4-D	6.98	0.14	0.40	ug/l	8.00	ND	87	70-130	11	30	
2,4-DB	14.8	0.19	2.0	ug/l	16.0	ND	92	70-130	0.3	30	
3,5-Dichlorobenzoic acid	22.1	0.12	1.0	ug/l	8.00	ND	277	70-130	8	30	MS-01
Acifluorfen	4.31	0.030	0.40	ug/l	4.00	ND	108	70-130	2	30	
Bentazon	15.6	0.23	2.0	ug/l	16.0	ND	97	70-130	4	30	
Dalapon	6.92	0.11	0.40	ug/l	8.00	0.584	79	70-130	1	30	
DCPA	4.54	0.029	0.10	ug/l	4.00	0.0354	113	70-130	5	30	
Dicamba	7.91	0.15	0.60	ug/l	8.00	ND	99	70-130	0.3	30	
Dichloroprop	6.84	0.12	0.30	ug/l	8.00	ND	85	70-130	6	30	
Dinoseb	4.09	0.033	0.40	ug/l	4.00	ND	102	70-130	0.4	30	
Pentachlorophenol	4.12	0.014	0.20	ug/l	4.00	ND	103	70-130	3	30	
Picloram	4.85	0.050	0.60	ug/l	4.00	ND	121	70-130	6	30	
<i>Surrogate(s)</i>											
2,4-DCAA	10.2			ug/l	10.0		102	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
 Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:30

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2148 - EPA 508.1										
Blank (W4B2148-BLK1)					Prepared: 02/27/24 Analyzed: 03/09/24					
4,4'-DDD	ND	0.0030	0.010	ug/l						
4,4'-DDE	ND	0.0040	0.010	ug/l						
4,4'-DDT	ND	0.0030	0.010	ug/l						
Aldrin	ND	0.0040	0.010	ug/l						
alpha-BHC	ND	0.0015	0.010	ug/l						
Aroclor 1016	ND	0.048	0.10	ug/l						
Aroclor 1221	ND	0.044	0.10	ug/l						
Aroclor 1232	ND	0.064	0.10	ug/l						
Aroclor 1242	ND	0.070	0.10	ug/l						
Aroclor 1248	ND	0.049	0.10	ug/l						
Aroclor 1254	ND	0.068	0.10	ug/l						
Aroclor 1260	ND	0.076	0.10	ug/l						
beta-BHC	ND	0.0045	0.010	ug/l						
Chlordane (tech)	ND	0.067	0.10	ug/l						
Chlorothalonil	ND	0.0040	0.050	ug/l						
delta-BHC	ND	0.0030	0.010	ug/l						
Dieldrin	ND	0.0030	0.010	ug/l						
Endosulfan I	ND	0.0030	0.010	ug/l						
Endosulfan II	ND	0.0019	0.010	ug/l						
Endosulfan sulfate	ND	0.0030	0.010	ug/l						
Endrin	ND	0.0030	0.010	ug/l						
Endrin aldehyde	ND	0.0040	0.010	ug/l						
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l						
Heptachlor	ND	0.0031	0.010	ug/l						
Heptachlor epoxide	ND	0.0019	0.010	ug/l						
Hexachlorobenzene	ND	0.0019	0.050	ug/l						
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l						
Methoxychlor	ND	0.0030	0.010	ug/l						
PCBs, Total	ND	0.048	0.50	ug/l						
Propachlor	ND	0.045	0.20	ug/l						
Toxaphene	ND	0.37	1.0	ug/l						
Trifluralin	ND	0.0043	0.010	ug/l						
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0930			ug/l	0.100		93	70-130		
LCS (W4B2148-BS1)					Prepared: 02/27/24 Analyzed: 03/09/24					
4,4'-DDD	0.0866	0.0030	0.010	ug/l	0.100		87	70-130		
4,4'-DDE	0.0568	0.0040	0.010	ug/l	0.100		57	70-130		Q-01
4,4'-DDT	0.0968	0.0030	0.010	ug/l	0.100		97	70-130		
Aldrin	0.0238	0.0040	0.010	ug/l	0.100		24	50-130		Q-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2148 - EPA 508.1 (Continued)										
LCS (W4B2148-BS1)					Prepared: 02/27/24 Analyzed: 03/09/24					
alpha-BHC	0.0851	0.0015	0.010	ug/l	0.100		85 70-130			
beta-BHC	0.0931	0.0045	0.010	ug/l	0.100		93 70-130			
delta-BHC	0.0945	0.0030	0.010	ug/l	0.100		95 70-130			
Dieldrin	0.0830	0.0030	0.010	ug/l	0.100		83 70-130			
Endosulfan I	0.0722	0.0030	0.010	ug/l	0.100		72 70-130			
Endosulfan II	0.0811	0.0019	0.010	ug/l	0.100		81 70-130			
Endosulfan sulfate	0.0772	0.0030	0.010	ug/l	0.100		77 70-130			
Endrin	0.0945	0.0030	0.010	ug/l	0.100		95 70-130			
Endrin aldehyde	0.0629	0.0040	0.010	ug/l	0.100		63 70-130			Q-01
gamma-BHC (Lindane)	0.0919	0.0030	0.010	ug/l	0.100		92 70-130			
Heptachlor	0.0868	0.0031	0.010	ug/l	0.100		87 70-130			
Heptachlor epoxide	0.0900	0.0019	0.010	ug/l	0.100		90 70-130			
Methoxychlor	0.0827	0.0030	0.010	ug/l	0.100		83 70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0812			ug/l	0.100		81 70-130			
LCS (W4B2148-BS2)					Prepared: 02/27/24 Analyzed: 03/09/24					
Chlordane (tech)	0.429	0.067	0.10	ug/l	0.500		86 70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0680			ug/l	0.100		68 70-130			S-BS
LCS Dup (W4B2148-BSD1)					Prepared: 02/27/24 Analyzed: 03/09/24					
4,4'-DDD	0.0826	0.0030	0.010	ug/l	0.100		83 70-130	5	30	
4,4'-DDE	0.0610	0.0040	0.010	ug/l	0.100		61 70-130	7	30	Q-01
4,4'-DDT	0.0885	0.0030	0.010	ug/l	0.100		89 70-130	9	30	
Aldrin	0.0367	0.0040	0.010	ug/l	0.100		37 50-130	43	30	Q-01
alpha-BHC	0.0750	0.0015	0.010	ug/l	0.100		75 70-130	13	30	
beta-BHC	0.0776	0.0045	0.010	ug/l	0.100		78 70-130	18	30	
delta-BHC	0.0840	0.0030	0.010	ug/l	0.100		84 70-130	12	30	
Dieldrin	0.0749	0.0030	0.010	ug/l	0.100		75 70-130	10	30	
Endosulfan I	0.0652	0.0030	0.010	ug/l	0.100		65 70-130	10	30	BS-04
Endosulfan II	0.0742	0.0019	0.010	ug/l	0.100		74 70-130	9	30	
Endosulfan sulfate	0.0680	0.0030	0.010	ug/l	0.100		68 70-130	13	30	BS-04
Endrin	0.0846	0.0030	0.010	ug/l	0.100		85 70-130	11	30	
Endrin aldehyde	0.0487	0.0040	0.010	ug/l	0.100		49 70-130	26	30	Q-01
gamma-BHC (Lindane)	0.0808	0.0030	0.010	ug/l	0.100		81 70-130	13	30	
Heptachlor	0.0827	0.0031	0.010	ug/l	0.100		83 70-130	5	30	
Heptachlor epoxide	0.0810	0.0019	0.010	ug/l	0.100		81 70-130	11	30	
Methoxychlor	0.0745	0.0030	0.010	ug/l	0.100		75 70-130	10	30	
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0829			ug/l	0.100		83 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1613 - EPA 335.4											
LCS (W4B1613-BS1)											
Cyanide, Total	105	1.5	5.0	ug/l	100		105	90-110			
Matrix Spike (W4B1613-MS1)											
Source: 4B13136-01											
Cyanide, Total	210	1.5	5.0	ug/l	200	3.51	103	90-110			
Matrix Spike Dup (W4B1613-MSD1)											
Source: 4B13136-01											
Cyanide, Total	197	1.5	5.0	ug/l	200	3.51	97	90-110	6	20	

Quality Control Results

(Continued)

Diquat and Paraquat by EPA 549.2

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1161 - EPA 549.2											
Blank (W4B1161-BLK1)											
Diquat	ND	1.2	4.0	ug/l							
LCS (W4B1161-BS1)											
Diquat	20.6	1.2	4.0	ug/l	20.0		103	70-130			
Matrix Spike (W4B1161-MS1)											
Source: 4B14092-01											
Diquat	20.1	1.2	4.0	ug/l	20.0	ND	100	46-122			
Matrix Spike Dup (W4B1161-MSD1)											
Source: 4B14092-01											
Diquat	15.1	1.2	4.0	ug/l	20.0	ND	75	46-122	29	30	

Quality Control Results

(Continued)

Endothall By EPA 548.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1095 - EPA 548.1											
Blank (W4B1095-BLK1)											
Endothall	ND	11	45	ug/l							
LCS (W4B1095-BS1)											
Endothall	105	11	45	ug/l	100		105	80-120			
Matrix Spike (W4B1095-MS1)											
Source: 4B13136-01											
Endothall	14.7	0.0	90	ug/l	200	ND	7	0.1-109			J
Matrix Spike Dup (W4B1095-MSD1)											
Source: 4B13136-01											
Endothall	15.3	0.0	90	ug/l	200	ND	8	0.1-109	4	30	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Glycols by GC/FID

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2168 - EPA 8015B											
Blank (W4B2168-BLK1)											
Ethylene glycol	ND	4.7	10	mg/l							
<i>Surrogate(s)</i>											
1-Propanol	94.2			mg/l	100		94	50-150			
LCS (W4B2168-BS1)											
Ethylene glycol	92.5	4.7	10	mg/l	100		93	70-130			
<i>Surrogate(s)</i>											
1-Propanol	113			mg/l	100		113	50-150			
Matrix Spike (W4B2168-MS1)											
Source: 4B13136-01			Prepared & Analyzed: 02/27/24								
Ethylene glycol	93.4	4.7	10	mg/l	100	ND	93	57-127			
<i>Surrogate(s)</i>											
1-Propanol	71.6			mg/l	100		72	50-150			
Matrix Spike Dup (W4B2168-MSD1)											
Source: 4B13136-01			Prepared & Analyzed: 02/27/24								
Ethylene glycol	97.9	4.7	10	mg/l	100	ND	98	57-127	5	25	
<i>Surrogate(s)</i>											
1-Propanol	117			mg/l	100		117	50-150			

Quality Control Results

(Continued)

Glyphosate by EPA 547

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2067 - EPA 547											
Blank (W4B2067-BLK1)											
Glyphosate	ND	1.8	5.0	ug/l							
LCS (W4B2067-BS1)											
Glyphosate	27.3	1.8	5.0	ug/l	25.0		109	70-130			
Matrix Spike (W4B2067-MS1)											
Source: 4B02005-01			Prepared & Analyzed: 02/26/24								
Glyphosate	26.1	1.8	5.0	ug/l	25.0	ND	104	41-149			
Matrix Spike (W4B2067-MS2)											
Source: 4B14107-01			Prepared & Analyzed: 02/26/24								
Glyphosate	27.7	1.8	5.0	ug/l	25.0	ND	111	41-149			
Matrix Spike Dup (W4B2067-MSD1)											
Source: 4B02005-01			Prepared & Analyzed: 02/26/24								
Glyphosate	24.5	1.8	5.0	ug/l	25.0	ND	98	41-149	6	30	
Matrix Spike Dup (W4B2067-MSD2)											
Source: 4B14107-01			Prepared & Analyzed: 02/26/24								
Glyphosate	31.3	1.8	5.0	ug/l	25.0	ND	125	41-149	12	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Haloacetic Acids (HAAs) by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1492 - EPA 552.3											
Blank (W4B1492-BLK1)						Prepared: 02/20/24 Analyzed: 03/02/24					
Dibromoacetic acid (dbaa)	ND	0.28	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l							
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l							
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.7			ug/l	10.0		107	70-130			
LCS (W4B1492-BS1)						Prepared: 02/20/24 Analyzed: 03/02/24					
Dibromoacetic acid (dbaa)	10.6	0.28	1.0	ug/l	10.0		106	70-130			
Dichloroacetic acid (dcaa)	10.3	0.29	1.0	ug/l	10.0		103	70-130			
Monobromoacetic acid (mbaa)	10.2	0.34	1.0	ug/l	10.0		102	70-130			
Monochloroacetic acid (mcaa)	10.1	0.31	2.0	ug/l	10.0		101	70-130			
Trichloroacetic acid (tcaa)	10.2	0.29	1.0	ug/l	10.0		102	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.4			ug/l	10.0		104	70-130			
Matrix Spike (W4B1492-MS1)			Source: 3L15005-01			Prepared: 02/20/24 Analyzed: 03/02/24					
Dibromoacetic acid (dbaa)	10.9	0.28	1.0	ug/l	10.0	0.579	103	70-130			
Dichloroacetic acid (dcaa)	10.8	0.29	1.0	ug/l	10.0	0.357	104	70-130			
Monobromoacetic acid (mbaa)	10.5	0.34	1.0	ug/l	10.0	ND	105	70-130			
Monochloroacetic acid (mcaa)	9.80	0.31	2.0	ug/l	10.0	0.374	94	70-130			
Trichloroacetic acid (tcaa)	9.77	0.29	1.0	ug/l	10.0	ND	98	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.6			ug/l	10.0		106	70-130			
Matrix Spike Dup (W4B1492-MSD1)			Source: 3L15005-01			Prepared: 02/20/24 Analyzed: 03/02/24					
Dibromoacetic acid (dbaa)	10.9	0.28	1.0	ug/l	10.0	0.579	103	70-130	0.5	30	
Dichloroacetic acid (dcaa)	10.7	0.29	1.0	ug/l	10.0	0.357	103	70-130	0.6	30	
Monobromoacetic acid (mbaa)	10.3	0.34	1.0	ug/l	10.0	ND	103	70-130	1	30	
Monochloroacetic acid (mcaa)	10.4	0.31	2.0	ug/l	10.0	0.374	100	70-130	6	30	
Trichloroacetic acid (tcaa)	9.42	0.29	1.0	ug/l	10.0	ND	94	70-130	4	30	
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.2			ug/l	10.0		102	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:30

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2073 - EPA 245.1											
Blank (W4B2073-BLK1) Prepared & Analyzed: 02/26/24											
Mercury, Total	ND	0.037	0.050	ug/l							
Blank (W4B2073-BLK2) Prepared & Analyzed: 02/26/24											
Mercury, Total	ND	0.037	0.050	ug/l							
LCS (W4B2073-BS1) Prepared & Analyzed: 02/26/24											
Mercury, Total	1.05	0.037	0.050	ug/l	1.00		105	85-115			
Matrix Spike (W4B2073-MS1) Source: 4A16001-02 Prepared & Analyzed: 02/26/24											
Mercury, Total	1.03	0.037	0.050	ug/l	1.00	ND	103	70-130			
Matrix Spike (W4B2073-MS2) Source: 4B14135-01 Prepared & Analyzed: 02/26/24											
Mercury, Total	1.04	0.037	0.050	ug/l	1.00	ND	104	70-130			
Matrix Spike Dup (W4B2073-MSD1) Source: 4A16001-02 Prepared & Analyzed: 02/26/24											
Mercury, Total	1.03	0.037	0.050	ug/l	1.00	ND	103	70-130	0.3	20	
Matrix Spike Dup (W4B2073-MSD2) Source: 4B14135-01 Prepared & Analyzed: 02/26/24											
Mercury, Total	1.04	0.037	0.050	ug/l	1.00	ND	104	70-130	0.2	20	

Quality Control Results (Continued)

Perchlorate by EPA 314.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1575 - EPA 314.0											
Blank (W4B1575-BLK1) Prepared & Analyzed: 02/20/24											
Perchlorate	ND	0.26	1.0	ug/l							
LCS (W4B1575-BS1) Prepared & Analyzed: 02/20/24											
Perchlorate	9.44	0.26	1.0	ug/l	10.0		94	85-115			
Matrix Spike (W4B1575-MS1) Source: 4B13037-01 Prepared & Analyzed: 02/20/24											
Perchlorate	12.3	0.26	1.0	ug/l	10.0	3.15	91	80-120			
Matrix Spike Dup (W4B1575-MSD1) Source: 4B13037-01 Prepared & Analyzed: 02/20/24											
Perchlorate	12.3	0.26	1.0	ug/l	10.0	3.15	92	80-120	0.6	15	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Radiological Parameters by APHA/EPA Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1906 - EPA 900.0											
Blank (W4B1906-BLK1)											
Gross Beta	-1.63										
Counting Uncertainty: 0.708		MDA: 1.141									
LCS (W4B1906-BS1)											
Gross Beta	11.9				16.0		75	72-123			
Counting Uncertainty: 0.88		MDA: 1.046									
Matrix Spike (W4B1906-MS1)											
Gross Beta	14.4				16.0	0.795	85	61-125			
Counting Uncertainty: 0.872		MDA: 0.966									
Matrix Spike Dup (W4B1906-MSD1)											
Gross Beta	15.6				16.0	0.795	93	61-125	8	30	
Counting Uncertainty: 0.951		MDA: 1.088									
Batch: W4C0100 - SM 7110C											
Blank (W4C0100-BLK1)											
Gross Alpha	-1.08										
Counting Uncertainty: 0.141		MDA: 0.054									
LCS (W4C0100-BS1)											
Gross Alpha	6.25				7.20		87	60-122			
Counting Uncertainty: 0.405		MDA: 0.054									
Matrix Spike (W4C0100-MS1)											
Gross Alpha	15.7				18.0	2.22	75	28-149			
Counting Uncertainty: 0.407		MDA: 0.336									
Matrix Spike Dup (W4C0100-MSD1)											
Gross Alpha	16.6				18.0	2.22	80	28-149	5	30	
Counting Uncertainty: 0.419		MDA: 0.336									

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
 Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:30

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2063 - EPA 525.2											
Blank (W4B2063-BLK1)						Prepared: 02/26/24 Analyzed: 03/23/24					
Alachlor	ND	0.063	0.10	ug/l							
Atrazine	ND	0.042	0.10	ug/l							
Benzo (a) pyrene	ND	0.045	0.10	ug/l							
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							
Bromacil	ND	0.24	0.50	ug/l							
Butachlor	ND	0.040	0.10	ug/l							
Captan	ND	0.32	1.0	ug/l							
Chlorpropham	ND	0.040	0.10	ug/l							
Diazinon	ND	0.022	0.10	ug/l							
Dimethoate	ND	0.041	0.20	ug/l							
Diphenamid	ND	0.030	0.10	ug/l							
Disulfoton	ND	0.11	0.20	ug/l							
EPTC	ND	0.020	0.10	ug/l							
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							
Metolachlor	ND	0.030	0.10	ug/l							
Metribuzin	ND	0.030	0.10	ug/l							
Molinate	ND	0.030	0.10	ug/l							
Prometryn	ND	0.030	0.10	ug/l							
Simazine	ND	0.058	0.10	ug/l							
Terbacil	ND	0.090	2.0	ug/l							
Thiobencarb	ND	0.069	0.10	ug/l							
Trithion	ND	0.054	0.10	ug/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.42			ug/l	5.00		88	70-130			
Perylene-d12	4.85			ug/l	5.00		97	50-120			
Triphenyl phosphate	4.84			ug/l	5.00		97	70-130			
LCS (W4B2063-BS1)						Prepared: 02/26/24 Analyzed: 03/23/24					
Alachlor	7.27	0.063	0.10	ug/l	7.50		97	70-130			
Atrazine	5.85	0.042	0.10	ug/l	5.00		117	70-130			
Benzo (a) pyrene	3.68	0.045	0.10	ug/l	5.00		74	60-130			
Bis(2-ethylhexyl)adipate	5.47	0.38	5.0	ug/l	5.00		109	70-130			
Bis(2-ethylhexyl)phthalate	5.61	0.41	3.0	ug/l	5.00		112	70-130			
Bromacil	4.44	0.24	0.50	ug/l	5.00		89	70-130			
Butachlor	4.63	0.040	0.10	ug/l	5.00		93	70-130			
Captan	5.16	0.32	1.0	ug/l	5.00		103	70-130			
Chlorpropham	4.96	0.040	0.10	ug/l	5.00		99	70-130			
Diazinon	2.91	0.022	0.10	ug/l	5.00		58	50-120			
Dimethoate	3.89	0.041	0.20	ug/l	5.00		78	50-120			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Semivolatiles Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2063 - EPA 525.2 (Continued)										
LCS (W4B2063-BS1)					Prepared: 02/26/24 Analyzed: 03/23/24					
Diphenamid	5.50	0.030	0.10	ug/l	5.00		110 70-130			
Disulfoton	4.63	0.11	0.20	ug/l	5.00		93 50-120			
EPTC	5.20	0.020	0.10	ug/l	5.00		104 70-130			
Hexachlorocyclopentadiene	1.84	0.092	1.0	ug/l	2.50		74 33-106			
Metolachlor	4.50	0.030	0.10	ug/l	5.00		90 60-130			
Metribuzin	4.34	0.030	0.10	ug/l	5.00		87 50-120			
Molinate	5.33	0.030	0.10	ug/l	5.00		107 70-130			
Prometryn	3.75	0.030	0.10	ug/l	5.00		75 30-120			
Simazine	4.45	0.058	0.10	ug/l	5.00		89 60-130			
Terbacil	6.28	0.090	2.0	ug/l	5.00		126 70-130			
Thiobencarb	4.53	0.069	0.10	ug/l	5.00		91 70-130			
Trithion	4.75	0.054	0.10	ug/l	5.00		95 70-130			
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	4.92			ug/l	5.00		98 70-130			
Perylene-d12	4.35			ug/l	5.00		87 50-120			
Triphenyl phosphate	5.54			ug/l	5.00		111 70-130			
LCS Dup (W4B2063-BSD1)					Prepared: 02/26/24 Analyzed: 03/23/24					
Alachlor	6.93	0.063	0.10	ug/l	7.50		92 70-130	5	30	
Atrazine	5.40	0.042	0.10	ug/l	5.00		108 70-130	8	30	
Benzo (a) pyrene	3.66	0.045	0.10	ug/l	5.00		73 60-130	0.6	30	
Bis(2-ethylhexyl)adipate	5.13	0.38	5.0	ug/l	5.00		103 70-130	6	30	
Bis(2-ethylhexyl)phthalate	5.34	0.41	3.0	ug/l	5.00		107 70-130	5	30	
Bromacil	4.36	0.24	0.50	ug/l	5.00		87 70-130	2	30	
Butachlor	4.40	0.040	0.10	ug/l	5.00		88 70-130	5	30	
Captan	5.02	0.32	1.0	ug/l	5.00		100 70-130	3	30	
Chlorpropham	5.00	0.040	0.10	ug/l	5.00		100 70-130	0.8	30	
Diazinon	2.80	0.022	0.10	ug/l	5.00		56 50-120	4	30	
Dimethoate	3.54	0.041	0.20	ug/l	5.00		71 50-120	9	30	
Diphenamid	5.03	0.030	0.10	ug/l	5.00		101 70-130	9	30	
Disulfoton	4.43	0.11	0.20	ug/l	5.00		89 50-120	5	30	
EPTC	4.82	0.020	0.10	ug/l	5.00		96 70-130	8	30	
Hexachlorocyclopentadiene	2.03	0.092	1.0	ug/l	2.50		81 33-106	10	30	
Metolachlor	4.46	0.030	0.10	ug/l	5.00		89 60-130	1	30	
Metribuzin	4.18	0.030	0.10	ug/l	5.00		84 50-120	4	30	
Molinate	4.99	0.030	0.10	ug/l	5.00		100 70-130	7	30	
Prometryn	3.72	0.030	0.10	ug/l	5.00		74 30-120	0.6	30	
Simazine	4.59	0.058	0.10	ug/l	5.00		92 60-130	3	30	
Terbacil	5.36	0.090	2.0	ug/l	5.00		107 70-130	16	30	
Thiobencarb	4.51	0.069	0.10	ug/l	5.00		90 70-130	0.4	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2063 - EPA 525.2 (Continued)											
LCS Dup (W4B2063-BSD1)											
Triethion	4.34	0.054	0.10	ug/l	5.00		87	70-130	9	30	
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.55			ug/l	5.00		91	70-130			
Perylene-d12	4.25			ug/l	5.00		85	50-120			
Triphenyl phosphate	5.29			ug/l	5.00		106	70-130			

Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1941 - EPA 1613B											
Blank (W4B1941-BLK1)											
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l							
LCS (W4B1941-BS1)											
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	10.0			73-146			
LCS Dup (W4B1941-BSD1)											
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	10.0			73-146		20	
Batch: W4C0610 - EPA 1613B											
Blank (W4C0610-BLK1)											
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l							
LCS (W4C0610-BS1)											
2,3,7,8-TCDD (Dioxin)	8.06	2.48	5.00	pg/l	10.0		81	73-146			
LCS Dup (W4C0610-BSD1)											
2,3,7,8-TCDD (Dioxin)	10.0	2.48	5.00	pg/l	10.0		100	73-146	22	20	Q-12

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:30

Quality Control Results

(Continued)

Volatile Organics by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1568 - EPA 524.3											
Blank (W4B1568-BLK1) Prepared & Analyzed: 02/20/24											
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l							
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.423			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.406			ug/l	0.400		101	70-130			
LCS (W4B1568-BS1) Prepared & Analyzed: 02/20/24											
1,2-Dibromo-3-chloropropane	0.0624	0.0042	0.010	ug/l	0.0500		125	70-130			
1,2-Dibromoethane (EDB)	0.0577	0.0029	0.020	ug/l	0.0500		115	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.425			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.406			ug/l	0.400		101	70-130			
LCS Dup (W4B1568-BSD1) Prepared & Analyzed: 02/20/24											
1,2-Dibromo-3-chloropropane	0.0580	0.0042	0.010	ug/l	0.0500		116	70-130	7	30	
1,2-Dibromoethane (EDB)	0.0558	0.0029	0.020	ug/l	0.0500		112	70-130	3	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.424			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.411			ug/l	0.400		103	70-130			
Duplicate (W4B1568-DUP1) Source: 4B09104-02RE1 Prepared & Analyzed: 02/20/24											
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l		ND				30	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l		ND				30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.424			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.409			ug/l	0.400		102	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 - DDW
 Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:30

Notes and Definitions

Item	Definition
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
O-04	This analysis was performed outside the EPA recommended holding time.
Q-01	The recovery of this analyte in QC sample was outside control limits. Sample was justified as ND based on the low level standard at or below the reporting limit.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
S-BS	Surrogate recovery outside of control limits for LCS. The data was accepted based on valid recovery of the target analytes.
U	Result not detected above the detection limit
%REC	Percent Recovery
Dil	Dilution
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B13137

Project: COSM 97-005 - COPCs

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 3/08/2024

Received Date: 2/13/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/13/24 with the Chain-of-Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-2-54	Windsor Lee	4B13137-01	Water	02/13/24 09:10	
AT-GS-2-57	Windsor Lee	4B13137-02	Water	02/13/24 10:40	
AT-GS-2-58	Windsor Lee	4B13137-03	Water	02/13/24 09:20	
AT-GS-2-58D	Windsor Lee	4B13137-04	Water	02/13/24 09:30	
AT-UV-2-510	Windsor Lee	4B13137-05	Water	02/13/24 09:15	
AT-GAC-2-511	Windsor Lee	4B13137-06	Water	02/13/24 09:40	
AT-GAC-2-523	Windsor Lee	4B13137-07	Water	02/13/24 09:45	
AT-RO-2-514	Windsor Lee	4B13137-08	Water	02/13/24 11:30	
AT-RO-2-524	Windsor Lee	4B13137-09	Water	02/13/24 11:20	
AT-DEC-2-518	Windsor Lee	4B13137-10	Water	02/13/24 12:00	
AT-DEC-2-519	Windsor Lee	4B13137-11	Water	02/13/24 11:45	
AT-RES-2-522	Windsor Lee	4B13137-12	Water	02/13/24 12:30	
Trip Blank	Windsor Lee	4B13137-13	Water	02/13/24 00:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗		
Bromomethane	74-83-9	⊗		
Chloroethane	75-00-3	⊗		
Di-isopropyl ether	108-20-3	⊗		
2-Butanone	78-93-3	⊗		
2,2-Dichloropropane	594-20-7	⊗		
Bromochloromethane	74-97-5	⊗		
1,1-Dichloropropene	563-58-6	⊗		
Dibromomethane	74-95-3	⊗		
1,3-Dichloropropane	142-28-9	⊗		
2-Hexanone	591-78-6	⊗		
Bromobenzene	108-86-1	⊗		
1,2,3-Trichloropropane	96-18-4	⊗		
p-Isopropyltoluene	99-87-6	⊗		
Hexachlorobutadiene	87-68-3	⊗		
1,3-Dichloropropene, Total	542-75-6	⊗		
Acetone	67-64-1	⊗		
Acrylonitrile	107-13-1	⊗		
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		
SRL 524M-TCP in Water				
1,2,3-Trichloropropane	96-18-4		⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-2-54

Sampled: 02/13/24 9:10 by Windsor Lee

4B13137-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644		Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM	
1,2,3-Trichloropropane	0.045	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545		Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA	
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	02/24/24	
ADONA	ND	0.49	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.78	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	02/24/24	
PFBS	1.6	0.51	1.8	ng/l	1	02/24/24	J
PFDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.58	1.8	ng/l	1	02/24/24	
PFHpA	0.60	0.48	1.8	ng/l	1	02/24/24	J
PFHxA	2.0	0.44	1.8	ng/l	1	02/24/24	
PFHxS	1.3	0.53	1.8	ng/l	1	02/24/24	J
PFNA	ND	0.46	1.8	ng/l	1	02/24/24	
PFOA	0.61	0.60	1.8	ng/l	1	02/24/24	J
PFOS	ND	0.47	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.42	1.8	ng/l	1	02/24/24	

Surrogate(s)

13C2-PFDA	110%	Conc: 39.4	70-130	02/24/24
13C2-PFHxA	105%	Conc: 37.6	70-130	02/24/24
d5-EtFOSAA	101%	Conc: 145	70-130	02/24/24
HFPO-DA-13C3	101%	Conc: 36.2	70-130	02/24/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2116		Preparation: EPA 5030B		Prepared: 02/26/24 14:53		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	0.77	0.27	0.50	ug/l	1	02/27/24	

4B13137

Page 3 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:10 by Windsor Lee

4B13137-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2116		Preparation: EPA 5030B		Prepared: 02/26/24 14:53		Analyst: ADM	
1,1-Dichloroethene	4.0	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/27/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	0.80	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	4.7	0.27	0.50	ug/l	1	02/27/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:10 by Windsor Lee

4B13137-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2116

Preparation: EPA 5030B

Prepared: 02/26/24 14:53

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	1.1	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	4.7		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	48	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	0.26	0.18	0.50	ug/l	1	02/27/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	74%	Conc: 37.2	70-130	02/27/24
4-Bromofluorobenzene	84%	Conc: 41.8	70-130	02/27/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:10 by Windsor Lee

4B13137-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2116

Preparation: EPA 5030B

Prepared: 02/26/24 14:53

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:10 by Windsor Lee

4B13137-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1631

Preparation: EPA 522/SPE

Prepared: 02/21/24 07:41

Analyst: mld

1,4-Dioxane	46	0.56	1.4	ug/l	20	02/27/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	80%	Conc: 7.74	70-130			02/27/24	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:40 by Windsor Lee

4B13137-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1631	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	0.15	0.028	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	71%	Conc: 6.96	70-130			02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644	Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545	Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	02/24/24	
ADONA	ND	0.48	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/24/24	
PFBS	ND	0.50	1.7	ng/l	1	02/24/24	
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.56	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.46	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.51	1.7	ng/l	1	02/24/24	
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	ND	0.57	1.7	ng/l	1	02/24/24	
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	114%	Conc: 39.2	70-130			02/24/24	
13C2-PFHxA	105%	Conc: 36.2	70-130			02/24/24	
d5-EtFOSAA	107%	Conc: 148	70-130			02/24/24	
HFPO-DA-13C3	100%	Conc: 34.4	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B13137

Page 7 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:40 by Windsor Lee

4B13137-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2116		Preparation: EPA 5030B		Prepared: 02/26/24 14:53		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/27/24	
1,1-Dichloroethene	0.55	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	0.58	0.24	0.50	ug/l	1	02/27/24	
Bromoform	9.8	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:40 by Windsor Lee

4B13137-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2116		Preparation: EPA 5030B		Prepared: 02/26/24 14:53		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	2.8	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	0.23	0.18	0.50	ug/l	1	02/27/24	J
THMs, Total	13		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	4.8	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:40 by Windsor Lee

4B13137-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2116		Preparation: EPA 5030B		Prepared: 02/26/24 14:53		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	93%	Conc: 46.3	70-130			02/27/24	
4-Bromofluorobenzene	93%	Conc: 46.6	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-58

Sampled: 02/13/24 9:20 by Windsor Lee

4B13137-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644		Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM	
1,2,3-Trichloropropane	0.044	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1545		Preparation: EPA 537/SPE		Prepared: 02/20/24 11:50		Analyst: JNA	
11CI-PF3OUdS	ND	0.51	1.8	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.48	1.8	ng/l	1	02/24/24	
ADONA	ND	0.50	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.44	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.79	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.52	1.8	ng/l	1	02/24/24	
PFBS	ND	0.52	1.8	ng/l	1	02/24/24	
PFDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFDaA	ND	0.60	1.8	ng/l	1	02/24/24	
PFHpA	ND	0.49	1.8	ng/l	1	02/24/24	
PFHxA	ND	0.44	1.8	ng/l	1	02/24/24	
PFHxS	ND	0.54	1.8	ng/l	1	02/24/24	
PFNA	ND	0.47	1.8	ng/l	1	02/24/24	
PFOA	ND	0.61	1.8	ng/l	1	02/24/24	
PFOS	ND	0.48	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFTrDA	ND	0.38	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.43	1.8	ng/l	1	02/24/24	

Surrogate(s)

13C2-PFDA	116%	Conc: 42.3	70-130	02/24/24
13C2-PFHxA	105%	Conc: 38.3	70-130	02/24/24
d5-EtFOSAA	104%	Conc: 151	70-130	02/24/24
HFPO-DA-13C3	93%	Conc: 33.8	70-130	02/24/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2116		Preparation: EPA 5030B		Prepared: 02/26/24 14:53		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	0.67	0.27	0.50	ug/l	1	02/27/24	

4B13137

Page 11 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-58

Sampled: 02/13/24 9:20 by Windsor Lee

4B13137-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2116		Preparation: EPA 5030B		Prepared: 02/26/24 14:53		Analyst: ADM	
1,1-Dichloroethene	3.6	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	0.35	0.24	0.50	ug/l	1	02/27/24	J
Bromoform	1.4	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	0.83	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	4.6	0.27	0.50	ug/l	1	02/27/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	1.7	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	1.1	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-58

Sampled: 02/13/24 9:20 by Windsor Lee

4B13137-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2116

Preparation: EPA 5030B

Prepared: 02/26/24 14:53

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	1.2	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	7.1		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	50	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	02/27/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	88%	Conc: 44.0	70-130	02/27/24
4-Bromofluorobenzene	71%	Conc: 35.4	70-130	02/27/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-58

Sampled: 02/13/24 9:20 by Windsor Lee

4B13137-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2116

Preparation: EPA 5030B

Prepared: 02/26/24 14:53

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-2-58

Sampled: 02/13/24 9:20 by Windsor Lee

4B13137-03RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1631

Preparation: EPA 522/SPE

Prepared: 02/21/24 07:41

Analyst: mld

1,4-Dioxane	44	0.56	1.4	ug/l	20	02/27/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	85%	Conc: 8.29	70-130			02/27/24	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-58D

Sampled: 02/13/24 9:30 by Windsor Lee

4B13137-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644		Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM	
1,2,3-Trichloropropane	0.048	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582		Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA	
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	02/24/24	
ADONA	ND	0.49	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	02/24/24	
PFBS	1.5	0.51	1.8	ng/l	1	02/24/24	J
PFDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.58	1.8	ng/l	1	02/24/24	
PFHpA	0.55	0.48	1.8	ng/l	1	02/24/24	J
PFHxA	2.0	0.43	1.8	ng/l	1	02/24/24	
PFHxS	1.2	0.53	1.8	ng/l	1	02/24/24	J
PFNA	ND	0.46	1.8	ng/l	1	02/24/24	
PFOA	0.63	0.59	1.8	ng/l	1	02/24/24	J
PFOS	ND	0.47	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.42	1.8	ng/l	1	02/24/24	

Surrogate(s)

13C2-PFDA	116%	Conc: 41.3	70-130	02/24/24
13C2-PFHxA	108%	Conc: 38.4	70-130	02/24/24
d5-EtFOSAA	104%	Conc: 149	70-130	02/24/24
HFPO-DA-13C3	101%	Conc: 36.0	70-130	02/24/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	0.78	0.27	0.50	ug/l	1	02/27/24	

4B13137

Page 15 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-58D

Sampled: 02/13/24 9:30 by Windsor Lee

4B13137-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1-Dichloroethene	4.0	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	0.34	0.24	0.50	ug/l	1	02/27/24	J
Bromoform	1.6	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	0.86	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	4.8	0.27	0.50	ug/l	1	02/27/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	1.2	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-58D

Sampled: 02/13/24 9:30 by Windsor Lee

4B13137-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2188

Preparation: EPA 5030B

Prepared: 02/27/24 12:05

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	1.2	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	7.6		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	49	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	0.25	0.18	0.50	ug/l	1	02/27/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	82%	Conc: 41.0	70-130	02/27/24
4-Bromofluorobenzene	81%	Conc: 40.4	70-130	02/27/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-2-58D

Sampled: 02/13/24 9:30 by Windsor Lee

4B13137-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2188

Preparation: EPA 5030B

Prepared: 02/27/24 12:05

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-2-58D

Sampled: 02/13/24 9:30 by Windsor Lee

4B13137-04RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1631

Preparation: EPA 522/SPE

Prepared: 02/21/24 07:41

Analyst: mld

1,4-Dioxane	50	0.56	1.4	ug/l	20	02/27/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	93%	Conc: 9.21	70-130			02/27/24	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-2-510

Sampled: 02/13/24 9:15 by Windsor Lee

4B13137-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1631	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	85%	Conc: 8.36	70-130			02/26/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644	Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM		
1,2,3-Trichloropropane	0.019	0.0012	0.0050	ug/l	1	02/21/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.51	1.8	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.48	1.8	ng/l	1	02/24/24	
ADONA	ND	0.50	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.79	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.52	1.8	ng/l	1	02/24/24	
PFBS	1.5	0.52	1.8	ng/l	1	02/24/24	J
PFDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.59	1.8	ng/l	1	02/24/24	
PFHpA	0.60	0.48	1.8	ng/l	1	02/24/24	J
PFHxA	2.1	0.44	1.8	ng/l	1	02/24/24	
PFHxS	1.3	0.54	1.8	ng/l	1	02/24/24	J
PFNA	ND	0.47	1.8	ng/l	1	02/24/24	
PFOA	ND	0.60	1.8	ng/l	1	02/24/24	
PFOS	ND	0.48	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.38	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.43	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	116%	Conc: 41.9	70-130			02/24/24	
13C2-PFHxA	112%	Conc: 40.4	70-130			02/24/24	
d5-EtFOSAA	109%	Conc: 158	70-130			02/24/24	
HFPO-DA-13C3	104%	Conc: 37.5	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-2-510

Sampled: 02/13/24 9:15 by Windsor Lee

4B13137-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	0.38	0.27	0.50	ug/l	1	02/27/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	3.4	3.1	5.0	ug/l	1	02/27/24	J
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/27/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	0.81	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	4.0	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-2-510

Sampled: 02/13/24 9:15 by Windsor Lee

4B13137-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	4.0		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	02/27/24	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-2-510

Sampled: 02/13/24 9:15 by Windsor Lee

4B13137-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.4	70-130			02/27/24	
4-Bromofluorobenzene	79%	Conc: 39.7	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-2-511

Sampled: 02/13/24 9:40 by Windsor Lee

4B13137-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1631	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	2.6	0.028	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	81%	Conc: 7.75	70-130			02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644	Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.48	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	02/24/24	
ADONA	ND	0.47	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.74	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	02/24/24	
PFBS	ND	0.49	1.7	ng/l	1	02/24/24	
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.56	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.46	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.51	1.7	ng/l	1	02/24/24	
PFNA	ND	0.44	1.7	ng/l	1	02/24/24	
PFOA	ND	0.57	1.7	ng/l	1	02/24/24	
PFOS	ND	0.45	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	110%	Conc: 37.5	70-130			02/24/24	
13C2-PFHxA	106%	Conc: 36.1	70-130			02/24/24	
d5-EtFOSAA	104%	Conc: 141	70-130			02/24/24	
HFPO-DA-13C3	99%	Conc: 33.8	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B13137

Page 23 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-2-511

Sampled: 02/13/24 9:40 by Windsor Lee

4B13137-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/27/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/27/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-2-511

Sampled: 02/13/24 9:40 by Windsor Lee

4B13137-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	ND		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-2-511

Sampled: 02/13/24 9:40 by Windsor Lee

4B13137-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 40.9	70-130			02/27/24	
4-Bromofluorobenzene	82%	Conc: 40.9	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-2-523

Sampled: 02/13/24 9:45 by Windsor Lee

4B13137-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1631	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	5.6	0.028	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	74%	Conc: 7.97	70-130			02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644	Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.56	2.0	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.53	2.0	ng/l	1	02/24/24	
ADONA	ND	0.55	2.0	ng/l	1	02/24/24	
EtFOSAA	ND	0.48	2.0	ng/l	1	02/24/24	
HFPO-DA	ND	0.87	2.0	ng/l	1	02/24/24	
MeFOSAA	ND	0.58	2.0	ng/l	1	02/24/24	
PFBS	ND	0.58	2.0	ng/l	1	02/24/24	
PFDA	ND	0.45	2.0	ng/l	1	02/24/24	
PFDoA	ND	0.66	2.0	ng/l	1	02/24/24	
PFHpA	ND	0.53	2.0	ng/l	1	02/24/24	
PFHxA	ND	0.49	2.0	ng/l	1	02/24/24	
PFHxS	ND	0.59	2.0	ng/l	1	02/24/24	
PFNA	ND	0.52	2.0	ng/l	1	02/24/24	
PFOA	ND	0.67	2.0	ng/l	1	02/24/24	
PFOS	ND	0.53	2.0	ng/l	1	02/24/24	
PFTeDA	ND	0.45	2.0	ng/l	1	02/24/24	
PFTTrDA	ND	0.42	2.0	ng/l	1	02/24/24	
PFUnA	ND	0.48	2.0	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	115%	Conc: 42.0	70-130			02/24/24	
13C2-PFHxA	107%	Conc: 39.1	70-130			02/24/24	
d5-EtFOSAA	108%	Conc: 158	70-130			02/24/24	
HFPO-DA-13C3	101%	Conc: 36.9	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B13137

Page 27 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-2-523

Sampled: 02/13/24 9:45 by Windsor Lee

4B13137-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/27/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/27/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-2-523

Sampled: 02/13/24 9:45 by Windsor Lee

4B13137-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	ND		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-2-523

Sampled: 02/13/24 9:45 by Windsor Lee

4B13137-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	81%	Conc: 40.4	70-130			02/27/24	
4-Bromofluorobenzene	81%	Conc: 40.3	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-2-514

Sampled: 02/13/24 11:30 by Windsor Lee

4B13137-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1631	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	0.79	0.028	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	86%	Conc: 8.25	70-130			02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644	Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	02/24/24	
ADONA	ND	0.47	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	02/24/24	
PFBS	ND	0.49	1.7	ng/l	1	02/24/24	
PFDA	ND	0.38	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.55	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.45	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.41	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.50	1.7	ng/l	1	02/24/24	
PFNA	ND	0.44	1.7	ng/l	1	02/24/24	
PFOA	ND	0.56	1.7	ng/l	1	02/24/24	
PFOS	ND	0.45	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.38	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.40	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	114%	Conc: 38.6	70-130			02/24/24	
13C2-PFHxA	110%	Conc: 37.0	70-130			02/24/24	
d5-EtFOSAA	105%	Conc: 142	70-130			02/24/24	
HFPO-DA-13C3	102%	Conc: 34.4	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B13137

Page 31 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-2-514

Sampled: 02/13/24 11:30 by Windsor Lee

4B13137-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/27/24	
1,1-Dichloroethene	0.25	0.16	0.50	ug/l	1	02/27/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	0.44	0.24	0.50	ug/l	1	02/27/24	J
Bromoform	6.8	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-2-514

Sampled: 02/13/24 11:30 by Windsor Lee

4B13137-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	2.3	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	9.1		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	3.4	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-2-514

Sampled: 02/13/24 11:30 by Windsor Lee

4B13137-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 40.2	70-130			02/27/24	
4-Bromofluorobenzene	80%	Conc: 40.2	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-2-524

Sampled: 02/13/24 11:20 by Windsor Lee

4B13137-09 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1631	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	0.078	0.028	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	79%	Conc: 7.78	70-130			02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1644	Preparation: EPA 5030B		Prepared: 02/21/24 09:25		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.8	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	02/24/24	
ADONA	ND	0.49	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	02/24/24	
PFBS	ND	0.51	1.8	ng/l	1	02/24/24	
PFDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.58	1.8	ng/l	1	02/24/24	
PFHpA	ND	0.47	1.8	ng/l	1	02/24/24	
PFHxA	ND	0.43	1.8	ng/l	1	02/24/24	
PFHxS	ND	0.52	1.8	ng/l	1	02/24/24	
PFNA	ND	0.46	1.8	ng/l	1	02/24/24	
PFOA	ND	0.59	1.8	ng/l	1	02/24/24	
PFOS	ND	0.47	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.42	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	116%	Conc: 40.7	70-130			02/24/24	
13C2-PFHxA	106%	Conc: 37.1	70-130			02/24/24	
d5-EtFOSAA	109%	Conc: 154	70-130			02/24/24	
HFPO-DA-13C3	101%	Conc: 35.6	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B13137

Page 35 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-2-524

Sampled: 02/13/24 11:20 by Windsor Lee

4B13137-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/27/24	
1,1-Dichloroethene	0.22	0.16	0.50	ug/l	1	02/27/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	42	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	0.26	0.24	0.50	ug/l	1	02/27/24	J
Bromoform	4.6	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-2-524

Sampled: 02/13/24 11:20 by Windsor Lee

4B13137-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	1.3	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	5.9		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	2.7	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-RO-2-524

Sampled: 02/13/24 11:20 by Windsor Lee

4B13137-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	76%	Conc: 38.1	70-130			02/27/24	
4-Bromofluorobenzene	77%	Conc: 38.3	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-2-518

Sampled: 02/13/24 12:00 by Windsor Lee

4B13137-10 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1491	Preparation: EPA 522/SPE		Prepared: 02/20/24 07:48		Analyst: mld		
1,4-Dioxane	0.20	0.028	0.070	ug/l	1	02/23/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 9.03	70-130			02/23/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1645	Preparation: EPA 5030B		Prepared: 02/21/24 09:26		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.48	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	02/24/24	
ADONA	ND	0.47	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	02/24/24	
PFBS	ND	0.50	1.7	ng/l	1	02/24/24	
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.56	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.46	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.51	1.7	ng/l	1	02/24/24	
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	ND	0.57	1.7	ng/l	1	02/24/24	
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	118%	Conc: 40.6	70-130			02/24/24	
13C2-PFHxA	109%	Conc: 37.4	70-130			02/24/24	
d5-EtFOSAA	109%	Conc: 150	70-130			02/24/24	
HFPO-DA-13C3	97%	Conc: 33.2	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B13137

Page 39 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-2-518

Sampled: 02/13/24 12:00 by Windsor Lee

4B13137-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/27/24	
1,1-Dichloroethene	0.21	0.16	0.50	ug/l	1	02/27/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	0.28	0.24	0.50	ug/l	1	02/27/24	J
Bromoform	4.9	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-2-518

Sampled: 02/13/24 12:00 by Windsor Lee

4B13137-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	1.4	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	6.3		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	2.7	0.18	0.50	ug/l	1	02/27/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-DEC-2-518

Sampled: 02/13/24 12:00 by Windsor Lee

4B13137-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	78%	Conc: 39.1	70-130			02/27/24	
4-Bromofluorobenzene	79%	Conc: 39.7	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-2-519

Sampled: 02/13/24 11:45 by Windsor Lee

4B13137-11 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1491	Preparation: EPA 522/SPE		Prepared: 02/20/24 07:48		Analyst: mld		
1,4-Dioxane	0.22	0.028	0.070	ug/l	1	02/23/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	90%	Conc: 8.78	70-130			02/23/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1645	Preparation: EPA 5030B		Prepared: 02/21/24 09:26		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	02/24/24	
ADONA	ND	0.47	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	02/24/24	
PFBS	ND	0.50	1.7	ng/l	1	02/24/24	
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.56	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.46	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.51	1.7	ng/l	1	02/24/24	
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	ND	0.57	1.7	ng/l	1	02/24/24	
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	115%	Conc: 39.4	70-130			02/24/24	
13C2-PFHxA	108%	Conc: 37.0	70-130			02/24/24	
d5-EtFOSAA	109%	Conc: 150	70-130			02/24/24	
HFPO-DA-13C3	95%	Conc: 32.5	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B13137

Page 43 of 73

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-2-519

Sampled: 02/13/24 11:45 by Windsor Lee

4B13137-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/27/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/27/24	
Bromoform	3.9	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-2-519

Sampled: 02/13/24 11:45 by Windsor Lee

4B13137-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	0.85	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	4.8		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	0.34	0.18	0.50	ug/l	1	02/27/24	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-DEC-2-519

Sampled: 02/13/24 11:45 by Windsor Lee

4B13137-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	77%	Conc: 38.5	70-130			02/27/24	
4-Bromofluorobenzene	81%	Conc: 40.4	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13137-12 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1491	Preparation: EPA 522/SPE		Prepared: 02/20/24 07:48		Analyst: mld		
1,4-Dioxane	0.23	0.028	0.070	ug/l	1	02/23/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	88%	Conc: 8.74	70-130			02/23/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1645	Preparation: EPA 5030B		Prepared: 02/21/24 09:26		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/21/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.8	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.46	1.8	ng/l	1	02/24/24	
ADONA	ND	0.48	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.76	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.50	1.8	ng/l	1	02/24/24	
PFBS	ND	0.51	1.8	ng/l	1	02/24/24	
PFDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.57	1.8	ng/l	1	02/24/24	
PFHpA	ND	0.47	1.8	ng/l	1	02/24/24	
PFHxA	ND	0.43	1.8	ng/l	1	02/24/24	
PFHxS	ND	0.52	1.8	ng/l	1	02/24/24	
PFNA	ND	0.46	1.8	ng/l	1	02/24/24	
PFOA	ND	0.58	1.8	ng/l	1	02/24/24	
PFOS	ND	0.47	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.42	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	117%	Conc: 41.1	70-130			02/24/24	
13C2-PFHxA	110%	Conc: 38.5	70-130			02/24/24	
d5-EtFOSAA	109%	Conc: 152	70-130			02/24/24	
HFPO-DA-13C3	102%	Conc: 35.7	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B13137

Page 47 of 73

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13137-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/27/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/27/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/27/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/27/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/27/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/27/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/27/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/27/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/27/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/27/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/27/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/27/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/27/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/27/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/27/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/27/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/27/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/27/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/27/24	
Acetone	ND	3.1	5.0	ug/l	1	02/27/24	
Benzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/27/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/27/24	
Bromoform	3.3	0.38	0.50	ug/l	1	02/27/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/27/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/27/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/27/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/27/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/27/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13137-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/27/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/27/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/27/24	
Dibromochloromethane	0.67	0.20	0.50	ug/l	1	02/27/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/27/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/27/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/27/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/27/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/27/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/27/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/27/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/27/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/27/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/27/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/27/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/27/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/27/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/27/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/27/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/27/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/27/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/27/24	
Styrene	ND	0.19	0.50	ug/l	1	02/27/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/27/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/27/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/27/24	
THMs, Total	4.0		0.50	ug/l	1	02/27/24	
Toluene	ND	0.29	0.50	ug/l	1	02/27/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/27/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/27/24	
Trichloroethene	0.27	0.18	0.50	ug/l	1	02/27/24	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/27/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13137-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/27/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.2	70-130			02/27/24	
4-Bromofluorobenzene	83%	Conc: 41.5	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/13/24 0:00 by Windsor Lee

4B13137-13 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/28/24	O-04
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/28/24	O-04
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/28/24	O-04
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/28/24	O-04
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/28/24	O-04
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/28/24	O-04
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/28/24	O-04
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/28/24	O-04
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/28/24	O-04
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/28/24	O-04
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/28/24	O-04
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/28/24	O-04
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/28/24	O-04
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/28/24	O-04
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/28/24	O-04
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/28/24	O-04
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/28/24	O-04
2-Butanone	ND	1.5	5.0	ug/l	1	02/28/24	O-04
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	O-04
2-Hexanone	ND	1.2	5.0	ug/l	1	02/28/24	O-04
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	O-04
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/28/24	O-04
Acetone	340	3.1	5.0	ug/l	1	02/28/24	O-04
Benzene	ND	0.15	0.50	ug/l	1	02/28/24	O-04
Bromobenzene	ND	0.15	0.50	ug/l	1	02/28/24	O-04
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/28/24	O-04
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/28/24	O-04
Bromoform	ND	0.38	0.50	ug/l	1	02/28/24	O-04
Bromomethane	ND	0.27	0.50	ug/l	1	02/28/24	O-04
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/28/24	O-04
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/28/24	O-04
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/28/24	O-04
Chloroethane	ND	0.17	0.50	ug/l	1	02/28/24	O-04
Chloroform	ND	0.27	0.50	ug/l	1	02/28/24	O-04

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/13/24 0:00 by Windsor Lee

4B13137-13 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B		Prepared: 02/27/24 12:05		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/28/24	O-04
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/28/24	O-04
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/28/24	O-04
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/28/24	O-04
Dibromomethane	ND	0.20	0.50	ug/l	1	02/28/24	O-04
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/28/24	O-04
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/28/24	O-04
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/28/24	O-04
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/28/24	O-04
Freon 113	ND	1.5	5.0	ug/l	1	02/28/24	O-04
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/28/24	O-04
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	O-04
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/28/24	O-04
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/28/24	O-04
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/28/24	O-04
Methylene chloride	ND	0.30	0.50	ug/l	1	02/28/24	O-04
Naphthalene	ND	0.35	0.50	ug/l	1	02/28/24	O-04
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/28/24	O-04
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	O-04
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/28/24	O-04
o-Xylene	ND	0.20	0.50	ug/l	1	02/28/24	O-04
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/28/24	O-04
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/28/24	O-04
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/28/24	O-04
Styrene	ND	0.19	0.50	ug/l	1	02/28/24	O-04
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/28/24	O-04
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	O-04
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/28/24	O-04
THMs, Total	ND		0.50	ug/l	1	02/28/24	O-04
Toluene	ND	0.29	0.50	ug/l	1	02/28/24	O-04
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/28/24	O-04
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/28/24	O-04
Trichloroethene	ND	0.18	0.50	ug/l	1	02/28/24	O-04
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/28/24	O-04

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/13/24 0:00 by Windsor Lee

4B13137-13 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2188		Preparation: EPA 5030B			Prepared: 02/27/24 12:05		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/28/24	O-04
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/28/24	O-04
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.4	70-130			02/28/24	
4-Bromofluorobenzene	82%	Conc: 40.8	70-130			02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1491 - EPA 522										
Blank (W4B1491-BLK1)					Prepared: 02/20/24 Analyzed: 02/23/24					
1,4-Dioxane	ND	0.028	0.070	ug/l						
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	7.90			ug/l	10.0		79 70-130			
Blank (W4B1491-BLK2)					Prepared: 02/20/24 Analyzed: 02/26/24					
1,4-Dioxane	ND	0.028	0.070	ug/l						QC-2
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.08			ug/l	10.0		81 70-130			QC-2
LCS (W4B1491-BS1)					Prepared: 02/20/24 Analyzed: 02/23/24					
1,4-Dioxane	0.0412	0.028	0.070	ug/l	0.0600		69 50-150			J
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.91			ug/l	10.0		89 70-130			
LCS (W4B1491-BS2)					Prepared: 02/20/24 Analyzed: 02/26/24					
1,4-Dioxane	0.0423	0.028	0.070	ug/l	0.0600		70 50-150			QC-2, J
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	9.14			ug/l	10.0		91 70-130			QC-2
LCS Dup (W4B1491-BSD1)					Prepared: 02/20/24 Analyzed: 02/23/24					
1,4-Dioxane	0.0452	0.028	0.070	ug/l	0.0600		75 50-150	9	50	J
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.47			ug/l	10.0		85 70-130			
LCS Dup (W4B1491-BSD2)					Prepared: 02/20/24 Analyzed: 02/26/24					
1,4-Dioxane	0.0463	0.028	0.070	ug/l	0.0600		77 50-150	9	50	QC-2, J
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.60			ug/l	10.0		86 70-130			QC-2
Batch: W4B1631 - EPA 522										
Blank (W4B1631-BLK1)					Prepared: 02/21/24 Analyzed: 02/27/24					
1,4-Dioxane	ND	0.028	0.070	ug/l						
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.94			ug/l	10.0		89 70-130			
LCS (W4B1631-BS1)					Prepared: 02/21/24 Analyzed: 02/26/24					
1,4-Dioxane	0.0451	0.028	0.070	ug/l	0.0600		75 50-150			J
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.64			ug/l	10.0		86 70-130			
LCS Dup (W4B1631-BSD1)					Prepared: 02/21/24 Analyzed: 02/27/24					
1,4-Dioxane	0.0553	0.028	0.070	ug/l	0.0600		92 50-150	20	50	J
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	9.55			ug/l	10.0		96 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1644 - SRL 524M-TCP										
Blank (W4B1644-BLK1)										
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l						
Prepared & Analyzed: 02/21/24										
LCS (W4B1644-BS1)										
1,2,3-Trichloropropane	0.0215	0.0012	0.0050	ug/l	0.0200		108 80-120			
Prepared & Analyzed: 02/21/24										
LCS Dup (W4B1644-BSD1)										
1,2,3-Trichloropropane	0.0221	0.0012	0.0050	ug/l	0.0200		110 80-120	2	20	
Prepared & Analyzed: 02/21/24										
Duplicate (W4B1644-DUP1)										
					Source: 4A26011-01RE1		Prepared & Analyzed: 02/21/24			
1,2,3-Trichloropropane	ND	0.024	0.10	ug/l		ND			20	
Batch: W4B1645 - SRL 524M-TCP										
Blank (W4B1645-BLK1)										
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l						
Prepared & Analyzed: 02/21/24										
LCS (W4B1645-BS1)										
1,2,3-Trichloropropane	0.0225	0.0012	0.0050	ug/l	0.0200		113 80-120			
Prepared & Analyzed: 02/21/24										
LCS Dup (W4B1645-BSD1)										
1,2,3-Trichloropropane	0.0206	0.0012	0.0050	ug/l	0.0200		103 80-120	9	20	
Prepared & Analyzed: 02/21/24										
Duplicate (W4B1645-DUP1)										
					Source: 4B13137-10		Prepared & Analyzed: 02/21/24			
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND			20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1545 - EPA 537.1									
Blank (W4B1545-BLK1)					Prepared: 02/20/24 Analyzed: 02/24/24				
11CI-PF3OUdS	ND	0.56	2.0	ng/l					
9CI-PF3ONS	ND	0.53	2.0	ng/l					
ADONA	ND	0.55	2.0	ng/l					
EtFOSAA	ND	0.48	2.0	ng/l					
HFPO-DA	ND	0.87	2.0	ng/l					
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	45.4			ng/l	40.0		113 70-130		
13C2-PFHxA	43.9			ng/l	40.0		110 70-130		
d5-EtFOSAA	166			ng/l	160		103 70-130		
HFPO-DA-13C3	42.0			ng/l	40.0		105 70-130		
LCS (W4B1545-BS1)					Prepared: 02/20/24 Analyzed: 02/24/24				
11CI-PF3OUdS	17.4	0.56	2.0	ng/l	20.0		87 70-130		
9CI-PF3ONS	17.1	0.53	2.0	ng/l	20.0		86 70-130		
ADONA	18.9	0.55	2.0	ng/l	20.0		94 70-130		
EtFOSAA	17.7	0.48	2.0	ng/l	20.0		89 70-130		
HFPO-DA	18.4	0.87	2.0	ng/l	20.0		92 70-130		
MeFOSAA	17.2	0.58	2.0	ng/l	20.0		86 70-130		
PFBS	19.4	0.58	2.0	ng/l	20.0		97 70-130		
PFDA	18.0	0.45	2.0	ng/l	20.0		90 70-130		
PFDoA	19.1	0.66	2.0	ng/l	20.0		96 70-130		
PFHpA	19.4	0.53	2.0	ng/l	20.0		97 70-130		
PFHxA	19.3	0.49	2.0	ng/l	20.0		97 70-130		
PFHxS	18.4	0.59	2.0	ng/l	20.0		92 70-130		
PFNA	19.7	0.52	2.0	ng/l	20.0		98 70-130		
PFOA	19.3	0.67	2.0	ng/l	20.0		96 70-130		
PFOS	18.5	0.53	2.0	ng/l	20.0		92 70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1545 - EPA 537.1 (Continued)										
LCS (W4B1545-BS1)					Prepared: 02/20/24 Analyzed: 02/24/24					
PFTeDA	18.7	0.45	2.0	ng/l	20.0		94 70-130			
PFTTrDA	17.6	0.42	2.0	ng/l	20.0		88 70-130			
PFUnA	18.4	0.48	2.0	ng/l	20.0		92 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	44.9			ng/l	40.0		112 70-130			
13C2-PFHxA	43.3			ng/l	40.0		108 70-130			
d5-EtFOSAA	164			ng/l	160		103 70-130			
HFPO-DA-13C3	41.7			ng/l	40.0		104 70-130			
LCS Dup (W4B1545-BSD1)					Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	17.6	0.56	2.0	ng/l	20.0		88 70-130	1	30	
9CI-PF3ONS	17.6	0.53	2.0	ng/l	20.0		88 70-130	3	30	
ADONA	18.6	0.55	2.0	ng/l	20.0		93 70-130	2	30	
EtFOSAA	17.5	0.48	2.0	ng/l	20.0		88 70-130	1	30	
HFPO-DA	17.3	0.87	2.0	ng/l	20.0		86 70-130	6	30	
MeFOSAA	16.7	0.58	2.0	ng/l	20.0		83 70-130	3	30	
PFBS	19.1	0.58	2.0	ng/l	20.0		95 70-130	2	30	
PFDA	18.2	0.45	2.0	ng/l	20.0		91 70-130	0.7	30	
PFDoA	19.2	0.66	2.0	ng/l	20.0		96 70-130	0.6	30	
PFHpA	19.0	0.53	2.0	ng/l	20.0		95 70-130	2	30	
PFHxA	19.0	0.49	2.0	ng/l	20.0		95 70-130	2	30	
PFHxS	18.1	0.59	2.0	ng/l	20.0		90 70-130	2	30	
PFNA	20.0	0.52	2.0	ng/l	20.0		100 70-130	2	30	
PFOA	19.2	0.67	2.0	ng/l	20.0		96 70-130	0.2	30	
PFOS	18.4	0.53	2.0	ng/l	20.0		92 70-130	0.2	30	
PFTeDA	17.9	0.45	2.0	ng/l	20.0		89 70-130	5	30	
PFTTrDA	18.0	0.42	2.0	ng/l	20.0		90 70-130	2	30	
PFUnA	18.6	0.48	2.0	ng/l	20.0		93 70-130	1	30	
<i>Surrogate(s)</i>										
13C2-PFDA	47.5			ng/l	40.0		119 70-130			
13C2-PFHxA	44.1			ng/l	40.0		110 70-130			
d5-EtFOSAA	166			ng/l	160		104 70-130			
HFPO-DA-13C3	42.1			ng/l	40.0		105 70-130			
Batch: W4B1582 - EPA 537.1										
Blank (W4B1582-BLK1)					Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	ND	0.56	2.0	ng/l						
9CI-PF3ONS	ND	0.53	2.0	ng/l						
ADONA	ND	0.55	2.0	ng/l						
EtFOSAA	ND	0.48	2.0	ng/l						
HFPO-DA	ND	0.87	2.0	ng/l						

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1582 - EPA 537.1 (Continued)									
Blank (W4B1582-BLK1)					Prepared: 02/20/24 Analyzed: 02/24/24				
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	45.2			ng/l	40.0		113 70-130		
13C2-PFHxA	43.6			ng/l	40.0		109 70-130		
d5-EtFOSAA	165			ng/l	160		103 70-130		
HFPO-DA-13C3	40.0			ng/l	40.0		100 70-130		
LCS (W4B1582-BS1)					Prepared: 02/20/24 Analyzed: 02/24/24				
11Cl-PF3OUdS	67.9	0.56	2.0	ng/l	80.0		85 70-130		
9Cl-PF3ONS	68.1	0.53	2.0	ng/l	80.0		85 70-130		
ADONA	70.0	0.55	2.0	ng/l	80.0		88 70-130		
EtFOSAA	66.1	0.48	2.0	ng/l	80.0		83 70-130		
HFPO-DA	65.7	0.87	2.0	ng/l	80.0		82 70-130		
MeFOSAA	65.7	0.58	2.0	ng/l	80.0		82 70-130		
PFBS	73.4	0.58	2.0	ng/l	80.0		92 70-130		
PFDA	70.1	0.45	2.0	ng/l	80.0		88 70-130		
PFDoA	69.6	0.66	2.0	ng/l	80.0		87 70-130		
PFHpA	72.6	0.53	2.0	ng/l	80.0		91 70-130		
PFHxA	71.9	0.49	2.0	ng/l	80.0		90 70-130		
PFHxS	73.1	0.59	2.0	ng/l	80.0		91 70-130		
PFNA	72.8	0.52	2.0	ng/l	80.0		91 70-130		
PFOA	72.3	0.67	2.0	ng/l	80.0		90 70-130		
PFOS	71.4	0.53	2.0	ng/l	80.0		89 70-130		
PFTeDA	66.9	0.45	2.0	ng/l	80.0		84 70-130		
PFTrDA	68.8	0.42	2.0	ng/l	80.0		86 70-130		
PFUnA	70.2	0.48	2.0	ng/l	80.0		88 70-130		
<i>Surrogate(s)</i>									
13C2-PFDA	43.9			ng/l	40.0		110 70-130		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1582 - EPA 537.1 (Continued)											
LCS (W4B1582-BS1)						Prepared: 02/20/24 Analyzed: 02/24/24					
<i>Surrogate(s)</i>											
13C2-PFHxA	42.6			ng/l	40.0		106	70-130			
d5-EtFOSAA	158			ng/l	160		98	70-130			
HFPO-DA-13C3	39.6			ng/l	40.0		99	70-130			
LCS Dup (W4B1582-BSD1)						Prepared: 02/20/24 Analyzed: 02/24/24					
11Cl-PF3OUdS	68.2	0.56	2.0	ng/l	80.0		85	70-130	0.5	30	
9Cl-PF3ONS	68.6	0.53	2.0	ng/l	80.0		86	70-130	0.7	30	
ADONA	70.7	0.55	2.0	ng/l	80.0		88	70-130	0.9	30	
EtFOSAA	67.8	0.48	2.0	ng/l	80.0		85	70-130	3	30	
HFPO-DA	68.3	0.87	2.0	ng/l	80.0		85	70-130	4	30	
MeFOSAA	68.5	0.58	2.0	ng/l	80.0		86	70-130	4	30	
PFBS	73.4	0.58	2.0	ng/l	80.0		92	70-130	0.009	30	
PFDA	69.2	0.45	2.0	ng/l	80.0		87	70-130	1	30	
PFDoA	70.6	0.66	2.0	ng/l	80.0		88	70-130	1	30	
PFHpA	73.3	0.53	2.0	ng/l	80.0		92	70-130	1	30	
PFHxA	71.7	0.49	2.0	ng/l	80.0		90	70-130	0.3	30	
PFHxS	73.5	0.59	2.0	ng/l	80.0		92	70-130	0.5	30	
PFNA	73.4	0.52	2.0	ng/l	80.0		92	70-130	0.7	30	
PFOA	73.0	0.67	2.0	ng/l	80.0		91	70-130	1	30	
PFOS	71.2	0.53	2.0	ng/l	80.0		89	70-130	0.2	30	
PFTeDA	61.0	0.45	2.0	ng/l	80.0		76	70-130	9	30	
PFTrDA	69.3	0.42	2.0	ng/l	80.0		87	70-130	0.8	30	
PFUnA	71.0	0.48	2.0	ng/l	80.0		89	70-130	1	30	
<i>Surrogate(s)</i>											
13C2-PFDA	44.5			ng/l	40.0		111	70-130			
13C2-PFHxA	43.0			ng/l	40.0		108	70-130			
d5-EtFOSAA	165			ng/l	160		103	70-130			
HFPO-DA-13C3	40.9			ng/l	40.0		102	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2116 - EPA 524.2											
Blank (W4B2116-BLK1)						Prepared: 02/26/24 Analyzed: 02/27/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2116 - EPA 524.2 (Continued)											
Blank (W4B2116-BLK1)						Prepared: 02/26/24 Analyzed: 02/27/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	39.3			ug/l	50.0		79	70-130			
4-Bromofluorobenzene	41.7			ug/l	50.0		83	70-130			
LCS (W4B2116-BS1)						Prepared: 02/26/24 Analyzed: 02/27/24					
1,1,1,2-Tetrachloroethane	4.87	0.24	0.50	ug/l	5.00		97	70-130			
1,1,1-Trichloroethane	4.85	0.26	0.50	ug/l	5.00		97	70-130			
1,1,2,2-Tetrachloroethane	4.55	0.20	0.50	ug/l	5.00		91	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2116 - EPA 524.2 (Continued)											
LCS (W4B2116-BS1)						Prepared: 02/26/24 Analyzed: 02/27/24					
1,1,2-Trichloroethane	4.59	0.19	0.50	ug/l	5.00	92	70-130				
1,1-Dichloroethane	4.72	0.27	0.50	ug/l	5.00	94	70-130				
1,1-Dichloroethene	4.52	0.16	0.50	ug/l	5.00	90	70-130				
1,1-Dichloropropene	4.40	0.14	0.50	ug/l	5.00	88	70-130				
1,2,3-Trichlorobenzene	4.89	0.40	0.50	ug/l	5.00	98	70-130				
1,2,3-Trichloropropane	4.62	0.22	0.50	ug/l	5.00	92	70-130				
1,2,4-Trichlorobenzene	4.89	0.17	0.50	ug/l	5.00	98	70-130				
1,2,4-Trimethylbenzene	4.54	0.20	0.50	ug/l	5.00	91	70-130				
1,2-Dichloroethane	4.51	0.24	0.50	ug/l	5.00	90	70-130				
1,2-Dichloropropane	4.61	0.13	0.50	ug/l	5.00	92	70-130				
1,3,5-Trimethylbenzene	4.67	0.17	0.50	ug/l	5.00	93	70-130				
1,3-Dichloropropane	4.74	0.27	0.50	ug/l	5.00	95	70-130				
2,2-Dichloropropane	4.71	0.17	0.50	ug/l	5.00	94	70-130				
2-Butanone	4.19	1.5	5.0	ug/l	5.00	84	70-130				J
2-Chlorotoluene	4.98	0.15	0.50	ug/l	5.00	100	70-130				
2-Hexanone	4.55	1.2	5.0	ug/l	5.00	91	70-130				J
4-Chlorotoluene	4.96	0.15	0.50	ug/l	5.00	99	70-130				
4-Methyl-2-pentanone	4.15	1.8	5.0	ug/l	5.00	83	70-130				J
Acetone	47.2	3.1	5.0	ug/l	50.0	94	70-130				
Benzene	4.59	0.15	0.50	ug/l	5.00	92	70-130				
Bromobenzene	4.89	0.15	0.50	ug/l	5.00	98	70-130				
Bromochloromethane	4.45	0.15	0.50	ug/l	5.00	89	70-130				
Bromodichloromethane	4.46	0.24	0.50	ug/l	5.00	89	70-130				
Bromoform	4.96	0.38	0.50	ug/l	5.00	99	70-130				
Bromomethane	4.51	0.27	0.50	ug/l	5.00	90	70-130				
Carbon Disulfide	4.63	0.25	0.50	ug/l	5.00	93	70-130				
Carbon tetrachloride	4.88	0.27	0.50	ug/l	5.00	98	70-130				
Chlorobenzene	5.13	0.15	0.50	ug/l	5.00	103	70-130				
Chloroethane	4.48	0.17	0.50	ug/l	5.00	90	70-130				
Chloroform	4.54	0.27	0.50	ug/l	5.00	91	70-130				
Chloromethane	3.93	0.23	0.50	ug/l	5.00	79	70-130				
cis-1,2-Dichloroethene	4.47	0.25	0.50	ug/l	5.00	89	70-130				
cis-1,3-Dichloropropene	4.78	0.30	0.50	ug/l	5.00	96	70-130				
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00	99	70-130				
Dibromomethane	4.81	0.20	0.50	ug/l	5.00	96	70-130				
Dichlorodifluoromethane (Freon 12)	4.57	0.45	0.50	ug/l	5.00	91	70-130				
Di-isopropyl ether	18.5	1.1	2.0	ug/l	20.0	93	70-130				
Ethyl tert-butyl ether	18.1	1.0	2.0	ug/l	20.0	90	70-130				
Ethylbenzene	4.64	0.21	0.50	ug/l	5.00	93	70-130				

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2116 - EPA 524.2 (Continued)											
LCS (W4B2116-BS1)						Prepared: 02/26/24 Analyzed: 02/27/24					
Freon 113	4.75	1.5	5.0	ug/l	5.00		95	70-130			J
Hexachlorobutadiene	5.05	0.40	0.50	ug/l	5.00		101	70-130			
Isopropylbenzene	4.58	0.18	0.50	ug/l	5.00		92	70-130			
m,p-Xylene	4.70	0.33	0.50	ug/l	5.00		94	70-130			
m-Dichlorobenzene	4.63	0.14	0.50	ug/l	5.00		93	70-130			
Methyl tert-butyl ether (MTBE)	18.6	0.94	2.0	ug/l	20.0		93	70-130			
Methylene chloride	4.22	0.30	0.50	ug/l	5.00		84	70-130			
Naphthalene	4.47	0.35	0.50	ug/l	5.00		89	70-130			
n-Butylbenzene	4.72	0.29	0.50	ug/l	5.00		94	70-130			
n-Propylbenzene	4.49	0.18	0.50	ug/l	5.00		90	70-130			
o-Dichlorobenzene	4.75	0.19	0.50	ug/l	5.00		95	70-130			
o-Xylene	4.69	0.20	0.50	ug/l	5.00		94	70-130			
p-Dichlorobenzene	4.77	0.18	0.50	ug/l	5.00		95	70-130			
p-Isopropyltoluene	4.48	0.25	0.50	ug/l	5.00		90	70-130			
sec-Butylbenzene	4.37	0.24	0.50	ug/l	5.00		87	70-130			
Styrene	4.82	0.19	0.50	ug/l	5.00		96	70-130			
Tert-amyl methyl ether	18.6	0.59	2.0	ug/l	20.0		93	70-130			
tert-Butylbenzene	4.51	0.18	0.50	ug/l	5.00		90	70-130			
Tetrachloroethene	5.10	0.18	0.50	ug/l	5.00		102	70-130			
Toluene	4.42	0.29	0.50	ug/l	5.00		88	70-130			
trans-1,2-Dichloroethene	4.66	0.26	0.50	ug/l	5.00		93	70-130			
trans-1,3-Dichloropropene	4.87	0.32	0.50	ug/l	5.00		97	70-130			
Trichloroethene	5.02	0.18	0.50	ug/l	5.00		100	70-130			
Trichlorofluoromethane	4.81	0.18	0.50	ug/l	5.00		96	70-130			
Vinyl chloride	4.48	0.18	0.50	ug/l	5.00		90	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	42.3			ug/l	50.0		85	70-130			
4-Bromofluorobenzene	43.0			ug/l	50.0		86	70-130			
LCS Dup (W4B2116-BS1)						Prepared: 02/26/24 Analyzed: 02/27/24					
1,1,1,2-Tetrachloroethane	4.95	0.24	0.50	ug/l	5.00		99	70-130	2	30	
1,1,1-Trichloroethane	4.70	0.26	0.50	ug/l	5.00		94	70-130	3	30	
1,1,2,2-Tetrachloroethane	4.61	0.20	0.50	ug/l	5.00		92	70-130	1	30	
1,1,2-Trichloroethane	4.65	0.19	0.50	ug/l	5.00		93	70-130	1	30	
1,1-Dichloroethane	4.60	0.27	0.50	ug/l	5.00		92	70-130	3	30	
1,1-Dichloroethene	4.32	0.16	0.50	ug/l	5.00		86	70-130	5	30	
1,1-Dichloropropene	4.23	0.14	0.50	ug/l	5.00		85	70-130	4	30	
1,2,3-Trichlorobenzene	4.88	0.40	0.50	ug/l	5.00		98	70-130	0.2	30	
1,2,3-Trichloropropane	4.79	0.22	0.50	ug/l	5.00		96	70-130	4	30	
1,2,4-Trichlorobenzene	5.02	0.17	0.50	ug/l	5.00		100	70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2116 - EPA 524.2 (Continued)											
LCS Dup (W4B2116-BSD1)											
					Prepared: 02/26/24 Analyzed: 02/27/24						
1,2,4-Trimethylbenzene	4.47	0.20	0.50	ug/l	5.00	89	70-130	1	30		
1,2-Dichloroethane	4.59	0.24	0.50	ug/l	5.00	92	70-130	2	30		
1,2-Dichloropropane	4.57	0.13	0.50	ug/l	5.00	91	70-130	0.8	30		
1,3,5-Trimethylbenzene	4.59	0.17	0.50	ug/l	5.00	92	70-130	2	30		
1,3-Dichloropropane	4.90	0.27	0.50	ug/l	5.00	98	70-130	3	30		
2,2-Dichloropropane	4.56	0.17	0.50	ug/l	5.00	91	70-130	3	30		
2-Butanone	4.26	1.5	5.0	ug/l	5.00	85	70-130	2	30		J
2-Chlorotoluene	4.94	0.15	0.50	ug/l	5.00	99	70-130	0.8	30		
2-Hexanone	4.90	1.2	5.0	ug/l	5.00	98	70-130	7	30		J
4-Chlorotoluene	4.90	0.15	0.50	ug/l	5.00	98	70-130	1	30		
4-Methyl-2-pentanone	4.71	1.8	5.0	ug/l	5.00	94	70-130	13	30		J
Acetone	48.5	3.1	5.0	ug/l	50.0	97	70-130	3	30		
Benzene	4.59	0.15	0.50	ug/l	5.00	92	70-130	0.05	30		
Bromobenzene	4.93	0.15	0.50	ug/l	5.00	99	70-130	0.8	30		
Bromochloromethane	4.57	0.15	0.50	ug/l	5.00	91	70-130	3	30		
Bromodichloromethane	4.46	0.24	0.50	ug/l	5.00	89	70-130	0.02	30		
Bromoform	5.15	0.38	0.50	ug/l	5.00	103	70-130	4	30		
Bromomethane	4.50	0.27	0.50	ug/l	5.00	90	70-130	0.2	30		
Carbon Disulfide	4.49	0.25	0.50	ug/l	5.00	90	70-130	3	30		
Carbon tetrachloride	4.67	0.27	0.50	ug/l	5.00	93	70-130	4	30		
Chlorobenzene	5.21	0.15	0.50	ug/l	5.00	104	70-130	2	30		
Chloroethane	4.42	0.17	0.50	ug/l	5.00	88	70-130	1	30		
Chloroform	4.58	0.27	0.50	ug/l	5.00	92	70-130	0.9	30		
Chloromethane	4.13	0.23	0.50	ug/l	5.00	83	70-130	5	30		
cis-1,2-Dichloroethene	4.41	0.25	0.50	ug/l	5.00	88	70-130	1	30		
cis-1,3-Dichloropropene	4.93	0.30	0.50	ug/l	5.00	99	70-130	3	30		
Dibromochloromethane	4.99	0.20	0.50	ug/l	5.00	100	70-130	0.8	30		
Dibromomethane	4.80	0.20	0.50	ug/l	5.00	96	70-130	0.2	30		
Dichlorodifluoromethane (Freon 12)	4.34	0.45	0.50	ug/l	5.00	87	70-130	5	30		
Di-isopropyl ether	18.6	1.1	2.0	ug/l	20.0	93	70-130	0.6	30		
Ethyl tert-butyl ether	19.0	1.0	2.0	ug/l	20.0	95	70-130	5	30		
Ethylbenzene	4.59	0.21	0.50	ug/l	5.00	92	70-130	0.9	30		
Freon 113	4.55	1.5	5.0	ug/l	5.00	91	70-130	4	30		J
Hexachlorobutadiene	4.93	0.40	0.50	ug/l	5.00	99	70-130	2	30		
Isopropylbenzene	4.51	0.18	0.50	ug/l	5.00	90	70-130	2	30		
m,p-Xylene	4.58	0.33	0.50	ug/l	5.00	92	70-130	3	30		
m-Dichlorobenzene	4.58	0.14	0.50	ug/l	5.00	92	70-130	0.9	30		
Methyl tert-butyl ether (MTBE)	19.6	0.94	2.0	ug/l	20.0	98	70-130	5	30		
Methylene chloride	4.12	0.30	0.50	ug/l	5.00	82	70-130	2	30		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2116 - EPA 524.2 (Continued)											
LCS Dup (W4B2116-BSD1)						Prepared: 02/26/24 Analyzed: 02/27/24					
Naphthalene	4.50	0.35	0.50	ug/l	5.00	90	70-130	0.7	30		
n-Butylbenzene	4.65	0.29	0.50	ug/l	5.00	93	70-130	2	30		
n-Propylbenzene	4.40	0.18	0.50	ug/l	5.00	88	70-130	2	30		
o-Dichlorobenzene	4.75	0.19	0.50	ug/l	5.00	95	70-130	0.06	30		
o-Xylene	4.66	0.20	0.50	ug/l	5.00	93	70-130	0.6	30		
p-Dichlorobenzene	4.76	0.18	0.50	ug/l	5.00	95	70-130	0.1	30		
p-Isopropyltoluene	4.36	0.25	0.50	ug/l	5.00	87	70-130	3	30		
sec-Butylbenzene	4.35	0.24	0.50	ug/l	5.00	87	70-130	0.4	30		
Styrene	4.84	0.19	0.50	ug/l	5.00	97	70-130	0.3	30		
Tert-amyl methyl ether	20.0	0.59	2.0	ug/l	20.0	100	70-130	7	30		
tert-Butylbenzene	4.48	0.18	0.50	ug/l	5.00	90	70-130	0.6	30		
Tetrachloroethene	5.02	0.18	0.50	ug/l	5.00	100	70-130	1	30		
Toluene	4.42	0.29	0.50	ug/l	5.00	88	70-130	0.1	30		
trans-1,2-Dichloroethene	4.51	0.26	0.50	ug/l	5.00	90	70-130	3	30		
trans-1,3-Dichloropropene	5.01	0.32	0.50	ug/l	5.00	100	70-130	3	30		
Trichloroethene	4.88	0.18	0.50	ug/l	5.00	98	70-130	3	30		
Trichlorofluoromethane	4.68	0.18	0.50	ug/l	5.00	94	70-130	3	30		
Vinyl chloride	4.38	0.18	0.50	ug/l	5.00	88	70-130	2	30		
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	43.4			ug/l	50.0	87	70-130				
4-Bromofluorobenzene	43.7			ug/l	50.0	87	70-130				

Batch: W4B2188 - EPA 524.2

Blank (W4B2188-BLK1)						Prepared: 02/27/24 Analyzed: 02/28/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2188 - EPA 524.2 (Continued)										
Blank (W4B2188-BLK1)					Prepared: 02/27/24 Analyzed: 02/28/24					
2,2-Dichloropropane	ND	0.17	0.50	ug/l						
2-Butanone	ND	1.5	5.0	ug/l						
2-Chlorotoluene	ND	0.15	0.50	ug/l						
2-Hexanone	ND	1.2	5.0	ug/l						
4-Chlorotoluene	ND	0.15	0.50	ug/l						
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l						
Acetone	ND	3.1	5.0	ug/l						
Acrylonitrile	ND	1.5	2.0	ug/l						
Benzene	ND	0.15	0.50	ug/l						
Bromobenzene	ND	0.15	0.50	ug/l						
Bromochloromethane	ND	0.15	0.50	ug/l						
Bromodichloromethane	ND	0.24	0.50	ug/l						
Bromoform	ND	0.38	0.50	ug/l						
Bromomethane	ND	0.27	0.50	ug/l						
Carbon Disulfide	ND	0.25	0.50	ug/l						
Carbon tetrachloride	ND	0.27	0.50	ug/l						
Chlorobenzene	ND	0.15	0.50	ug/l						
Chloroethane	ND	0.17	0.50	ug/l						
Chloroform	ND	0.27	0.50	ug/l						
Chloromethane	ND	0.23	0.50	ug/l						
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l						
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l						
Dibromochloromethane	ND	0.20	0.50	ug/l						
Dibromomethane	ND	0.20	0.50	ug/l						
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l						
Di-isopropyl ether	ND	1.1	2.0	ug/l						
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l						
Ethylbenzene	ND	0.21	0.50	ug/l						
Freon 113	ND	1.5	5.0	ug/l						
Hexachlorobutadiene	ND	0.40	0.50	ug/l						
Isopropylbenzene	ND	0.18	0.50	ug/l						
m,p-Xylene	ND	0.33	0.50	ug/l						
m-Dichlorobenzene	ND	0.14	0.50	ug/l						
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l						
Methylene chloride	0.570	0.30	0.50	ug/l						B-06
Naphthalene	ND	0.35	0.50	ug/l						
n-Butylbenzene	ND	0.29	0.50	ug/l						
n-Propylbenzene	ND	0.18	0.50	ug/l						
o-Dichlorobenzene	ND	0.19	0.50	ug/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2188 - EPA 524.2 (Continued)										
Blank (W4B2188-BLK1)					Prepared: 02/27/24 Analyzed: 02/28/24					
o-Xylene	ND	0.20	0.50	ug/l						
p-Dichlorobenzene	ND	0.18	0.50	ug/l						
p-Isopropyltoluene	ND	0.25	0.50	ug/l						
sec-Butylbenzene	ND	0.24	0.50	ug/l						
Styrene	ND	0.19	0.50	ug/l						
Tert-amyl methyl ether	ND	0.59	2.0	ug/l						
tert-Butylbenzene	ND	0.18	0.50	ug/l						
Tetrachloroethene	ND	0.18	0.50	ug/l						
THMs, Total	ND		0.50	ug/l						
Toluene	ND	0.29	0.50	ug/l						
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l						
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l						
Trichloroethene	ND	0.18	0.50	ug/l						
Trichlorofluoromethane	ND	0.18	0.50	ug/l						
Vinyl chloride	ND	0.18	0.50	ug/l						
Xylenes, Total	ND	0.33	0.50	ug/l						
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	38.9			ug/l	50.0		78 70-130			
4-Bromofluorobenzene	41.0			ug/l	50.0		82 70-130			
LCS (W4B2188-BS1)					Prepared: 02/27/24 Analyzed: 02/28/24					
1,1,1,2-Tetrachloroethane	4.87	0.24	0.50	ug/l	5.00		97 70-130			
1,1,1-Trichloroethane	4.50	0.26	0.50	ug/l	5.00		90 70-130			
1,1,2,2-Tetrachloroethane	4.52	0.20	0.50	ug/l	5.00		90 70-130			
1,1,2-Trichloroethane	4.65	0.19	0.50	ug/l	5.00		93 70-130			
1,1-Dichloroethane	4.28	0.27	0.50	ug/l	5.00		86 70-130			
1,1-Dichloroethene	4.14	0.16	0.50	ug/l	5.00		83 70-130			
1,1-Dichloropropene	4.21	0.14	0.50	ug/l	5.00		84 70-130			
1,2,3-Trichlorobenzene	4.75	0.40	0.50	ug/l	5.00		95 70-130			
1,2,3-Trichloropropane	4.73	0.22	0.50	ug/l	5.00		95 70-130			
1,2,4-Trichlorobenzene	4.76	0.17	0.50	ug/l	5.00		95 70-130			
1,2,4-Trimethylbenzene	4.41	0.20	0.50	ug/l	5.00		88 70-130			
1,2-Dichloroethane	4.46	0.24	0.50	ug/l	5.00		89 70-130			
1,2-Dichloropropane	4.32	0.13	0.50	ug/l	5.00		86 70-130			
1,3,5-Trimethylbenzene	4.59	0.17	0.50	ug/l	5.00		92 70-130			
1,3-Dichloropropane	4.72	0.27	0.50	ug/l	5.00		94 70-130			
2,2-Dichloropropane	4.14	0.17	0.50	ug/l	5.00		83 70-130			
2-Butanone	4.23	1.5	5.0	ug/l	5.00		85 70-130			J
2-Chlorotoluene	4.93	0.15	0.50	ug/l	5.00		99 70-130			
2-Hexanone	4.59	1.2	5.0	ug/l	5.00		92 70-130			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2188 - EPA 524.2 (Continued)											
LCS (W4B2188-BS1)											
					Prepared: 02/27/24 Analyzed: 02/28/24						
4-Chlorotoluene	4.90	0.15	0.50	ug/l	5.00	98	70-130				
4-Methyl-2-pentanone	4.31	1.8	5.0	ug/l	5.00	86	70-130				J
Acetone	44.9	3.1	5.0	ug/l	50.0	90	70-130				
Benzene	4.22	0.15	0.50	ug/l	5.00	84	70-130				
Bromobenzene	4.99	0.15	0.50	ug/l	5.00	100	70-130				
Bromochloromethane	4.05	0.15	0.50	ug/l	5.00	81	70-130				
Bromodichloromethane	4.44	0.24	0.50	ug/l	5.00	89	70-130				
Bromoform	5.22	0.38	0.50	ug/l	5.00	104	70-130				
Bromomethane	4.29	0.27	0.50	ug/l	5.00	86	70-130				
Carbon Disulfide	4.35	0.25	0.50	ug/l	5.00	87	70-130				
Carbon tetrachloride	4.57	0.27	0.50	ug/l	5.00	91	70-130				
Chlorobenzene	4.99	0.15	0.50	ug/l	5.00	100	70-130				
Chloroethane	4.17	0.17	0.50	ug/l	5.00	83	70-130				
Chloroform	4.43	0.27	0.50	ug/l	5.00	89	70-130				
Chloromethane	3.92	0.23	0.50	ug/l	5.00	78	70-130				
cis-1,2-Dichloroethene	4.21	0.25	0.50	ug/l	5.00	84	70-130				
cis-1,3-Dichloropropene	4.49	0.30	0.50	ug/l	5.00	90	70-130				
Dibromochloromethane	4.88	0.20	0.50	ug/l	5.00	98	70-130				
Dibromomethane	4.65	0.20	0.50	ug/l	5.00	93	70-130				
Dichlorodifluoromethane (Freon 12)	4.35	0.45	0.50	ug/l	5.00	87	70-130				
Di-isopropyl ether	16.9	1.1	2.0	ug/l	20.0	85	70-130				
Ethyl tert-butyl ether	18.3	1.0	2.0	ug/l	20.0	92	70-130				
Ethylbenzene	4.54	0.21	0.50	ug/l	5.00	91	70-130				
Freon 113	4.44	1.5	5.0	ug/l	5.00	89	70-130				J
Hexachlorobutadiene	4.95	0.40	0.50	ug/l	5.00	99	70-130				
Isopropylbenzene	4.55	0.18	0.50	ug/l	5.00	91	70-130				
m,p-Xylene	4.59	0.33	0.50	ug/l	5.00	92	70-130				
m-Dichlorobenzene	4.78	0.14	0.50	ug/l	5.00	96	70-130				
Methyl tert-butyl ether (MTBE)	18.3	0.94	2.0	ug/l	20.0	92	70-130				
Methylene chloride	3.88	0.30	0.50	ug/l	5.00	78	70-130				
Naphthalene	4.32	0.35	0.50	ug/l	5.00	86	70-130				
n-Butylbenzene	4.36	0.29	0.50	ug/l	5.00	87	70-130				
n-Propylbenzene	4.44	0.18	0.50	ug/l	5.00	89	70-130				
o-Dichlorobenzene	4.71	0.19	0.50	ug/l	5.00	94	70-130				
o-Xylene	4.61	0.20	0.50	ug/l	5.00	92	70-130				
p-Dichlorobenzene	4.79	0.18	0.50	ug/l	5.00	96	70-130				
p-Isopropyltoluene	4.40	0.25	0.50	ug/l	5.00	88	70-130				
sec-Butylbenzene	4.30	0.24	0.50	ug/l	5.00	86	70-130				
Styrene	4.82	0.19	0.50	ug/l	5.00	96	70-130				

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2188 - EPA 524.2 (Continued)										
LCS (W4B2188-BS1)					Prepared: 02/27/24 Analyzed: 02/28/24					
Tert-amyl methyl ether	19.1	0.59	2.0	ug/l	20.0	95	70-130			
tert-Butylbenzene	4.33	0.18	0.50	ug/l	5.00	87	70-130			
Tetrachloroethene	4.86	0.18	0.50	ug/l	5.00	97	70-130			
Toluene	4.42	0.29	0.50	ug/l	5.00	88	70-130			
trans-1,2-Dichloroethene	4.18	0.26	0.50	ug/l	5.00	84	70-130			
trans-1,3-Dichloropropene	5.00	0.32	0.50	ug/l	5.00	100	70-130			
Trichloroethene	4.64	0.18	0.50	ug/l	5.00	93	70-130			
Trichlorofluoromethane	4.69	0.18	0.50	ug/l	5.00	94	70-130			
Vinyl chloride	4.07	0.18	0.50	ug/l	5.00	81	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	45.3			ug/l	50.0	91	70-130			
4-Bromofluorobenzene	46.9			ug/l	50.0	94	70-130			
LCS Dup (W4B2188-BSD1)					Prepared: 02/27/24 Analyzed: 02/28/24					
1,1,1,2-Tetrachloroethane	4.68	0.24	0.50	ug/l	5.00	94	70-130	4	30	
1,1,1-Trichloroethane	4.37	0.26	0.50	ug/l	5.00	87	70-130	3	30	
1,1,2,2-Tetrachloroethane	4.33	0.20	0.50	ug/l	5.00	87	70-130	4	30	
1,1,2-Trichloroethane	4.52	0.19	0.50	ug/l	5.00	90	70-130	3	30	
1,1-Dichloroethane	4.39	0.27	0.50	ug/l	5.00	88	70-130	3	30	
1,1-Dichloroethene	4.15	0.16	0.50	ug/l	5.00	83	70-130	0.2	30	
1,1-Dichloropropene	4.10	0.14	0.50	ug/l	5.00	82	70-130	3	30	
1,2,3-Trichlorobenzene	4.70	0.40	0.50	ug/l	5.00	94	70-130	1	30	
1,2,3-Trichloropropane	4.70	0.22	0.50	ug/l	5.00	94	70-130	0.7	30	
1,2,4-Trichlorobenzene	4.61	0.17	0.50	ug/l	5.00	92	70-130	3	30	
1,2,4-Trimethylbenzene	4.15	0.20	0.50	ug/l	5.00	83	70-130	6	30	
1,2-Dichloroethane	4.49	0.24	0.50	ug/l	5.00	90	70-130	0.7	30	
1,2-Dichloropropane	4.23	0.13	0.50	ug/l	5.00	85	70-130	2	30	
1,3,5-Trimethylbenzene	4.21	0.17	0.50	ug/l	5.00	84	70-130	9	30	
1,3-Dichloropropane	4.61	0.27	0.50	ug/l	5.00	92	70-130	2	30	
2,2-Dichloropropane	3.94	0.17	0.50	ug/l	5.00	79	70-130	5	30	
2-Butanone	4.19	1.5	5.0	ug/l	5.00	84	70-130	0.8	30	J
2-Chlorotoluene	4.71	0.15	0.50	ug/l	5.00	94	70-130	5	30	
2-Hexanone	4.50	1.2	5.0	ug/l	5.00	90	70-130	2	30	J
4-Chlorotoluene	4.61	0.15	0.50	ug/l	5.00	92	70-130	6	30	
4-Methyl-2-pentanone	4.55	1.8	5.0	ug/l	5.00	91	70-130	5	30	J
Acetone	45.3	3.1	5.0	ug/l	50.0	91	70-130	0.9	30	
Benzene	4.27	0.15	0.50	ug/l	5.00	85	70-130	1	30	
Bromobenzene	4.76	0.15	0.50	ug/l	5.00	95	70-130	5	30	
Bromochloromethane	4.16	0.15	0.50	ug/l	5.00	83	70-130	3	30	
Bromodichloromethane	4.33	0.24	0.50	ug/l	5.00	87	70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2188 - EPA 524.2 (Continued)										
LCS Dup (W4B2188-BSD1)					Prepared: 02/27/24 Analyzed: 02/28/24					
Bromoform	5.03	0.38	0.50	ug/l	5.00	101	70-130	4	30	
Bromomethane	4.37	0.27	0.50	ug/l	5.00	87	70-130	2	30	
Carbon Disulfide	4.26	0.25	0.50	ug/l	5.00	85	70-130	2	30	
Carbon tetrachloride	4.44	0.27	0.50	ug/l	5.00	89	70-130	3	30	
Chlorobenzene	4.80	0.15	0.50	ug/l	5.00	96	70-130	4	30	
Chloroethane	4.19	0.17	0.50	ug/l	5.00	84	70-130	0.4	30	
Chloroform	4.29	0.27	0.50	ug/l	5.00	86	70-130	3	30	
Chloromethane	4.01	0.23	0.50	ug/l	5.00	80	70-130	2	30	
cis-1,2-Dichloroethene	4.22	0.25	0.50	ug/l	5.00	84	70-130	0.2	30	
cis-1,3-Dichloropropene	4.60	0.30	0.50	ug/l	5.00	92	70-130	3	30	
Dibromochloromethane	4.71	0.20	0.50	ug/l	5.00	94	70-130	3	30	
Dibromomethane	4.54	0.20	0.50	ug/l	5.00	91	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	4.11	0.45	0.50	ug/l	5.00	82	70-130	6	30	
Di-isopropyl ether	17.1	1.1	2.0	ug/l	20.0	85	70-130	0.9	30	
Ethyl tert-butyl ether	18.3	1.0	2.0	ug/l	20.0	92	70-130	0.08	30	
Ethylbenzene	4.26	0.21	0.50	ug/l	5.00	85	70-130	6	30	
Freon 113	4.35	1.5	5.0	ug/l	5.00	87	70-130	2	30	J
Hexachlorobutadiene	4.55	0.40	0.50	ug/l	5.00	91	70-130	9	30	
Isopropylbenzene	4.18	0.18	0.50	ug/l	5.00	84	70-130	8	30	
m,p-Xylene	4.31	0.33	0.50	ug/l	5.00	86	70-130	6	30	
m-Dichlorobenzene	4.31	0.14	0.50	ug/l	5.00	86	70-130	10	30	
Methyl tert-butyl ether (MTBE)	18.7	0.94	2.0	ug/l	20.0	93	70-130	2	30	
Methylene chloride	4.09	0.30	0.50	ug/l	5.00	82	70-130	5	30	
Naphthalene	4.18	0.35	0.50	ug/l	5.00	84	70-130	3	30	
n-Butylbenzene	4.18	0.29	0.50	ug/l	5.00	84	70-130	4	30	
n-Propylbenzene	4.07	0.18	0.50	ug/l	5.00	81	70-130	9	30	
o-Dichlorobenzene	4.53	0.19	0.50	ug/l	5.00	91	70-130	4	30	
o-Xylene	4.30	0.20	0.50	ug/l	5.00	86	70-130	7	30	
p-Dichlorobenzene	4.61	0.18	0.50	ug/l	5.00	92	70-130	4	30	
p-Isopropyltoluene	4.08	0.25	0.50	ug/l	5.00	82	70-130	7	30	
sec-Butylbenzene	4.02	0.24	0.50	ug/l	5.00	80	70-130	7	30	
Styrene	4.57	0.19	0.50	ug/l	5.00	91	70-130	5	30	
Tert-amyl methyl ether	18.4	0.59	2.0	ug/l	20.0	92	70-130	3	30	
tert-Butylbenzene	4.09	0.18	0.50	ug/l	5.00	82	70-130	6	30	
Tetrachloroethene	4.69	0.18	0.50	ug/l	5.00	94	70-130	3	30	
Toluene	4.51	0.29	0.50	ug/l	5.00	90	70-130	2	30	
trans-1,2-Dichloroethene	4.24	0.26	0.50	ug/l	5.00	85	70-130	1	30	
trans-1,3-Dichloropropene	4.68	0.32	0.50	ug/l	5.00	94	70-130	7	30	
Trichloroethene	4.54	0.18	0.50	ug/l	5.00	91	70-130	2	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/08/2024 15:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2188 - EPA 524.2 (Continued)											
LCS Dup (W4B2188-BSD1)											
					Prepared: 02/27/24 Analyzed: 02/28/24						
Trichlorofluoromethane	4.48	0.18	0.50	ug/l	5.00		90	70-130	5	30	
Vinyl chloride	4.08	0.18	0.50	ug/l	5.00		82	70-130	0.3	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	43.6			ug/l	50.0		87	70-130			
4-Bromofluorobenzene	45.9			ug/l	50.0		92	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:46

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
B-06	This analyte was found in the method blank, which was possibly contaminated during sample preparation. The batch was accepted since this analyte was either not detected or more than 10 times of the blank value for all the samples in the batch.
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
O-04	This analysis was performed outside the EPA recommended holding time.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **4813137**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005 - COPCs		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: (213) 271-2237 ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TOP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindle		SAMPLER Windsor Lee						invoice to Rose Ford, Rford@BrwnCald.com	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TOP	537.1 PFOA	COMMENTS
	2/13/24	09:10	grab	AT-GS-2-54	9	✓	✓	✓	✓	* Some vials arrived w/ headspace JB 2/13/24
	2/13/24	10:40	grab	AT-GS-2-57	9	✓	✓	✓	✓	
	2/13/24	09:20	grab	AT-GS-2-58	9	✓	✓	✓	✓	
	2/13/24	09:30	grab	AT-GS-2-58D	9	✓	✓	✓	✓	
	2/13/24	09:15	grab	AT-UV-2-510	9	✓	✓	✓	✓	
	2/13/24	09:40	grab	AT-GAL-2-511	9	✓	✓	✓	✓	
	2/13/24	09:45	grab	AT-GAL-2-523	9	✓	✓	✓	✓	
	2/13/24	11:30	grab	AT-RO-2-514	9	✓	✓	✓	✓	
	2/13/24	11:20	grab	AT-RO-2-524	9	✓	✓	✓	✓	
	2/13/24	12:00	grab	AT-DEL-2-518	9	✓	✓	✓	✓	
	2/13/24	11:45	grab	AT-DEL-2-519	9	✓	✓	✓	✓	
	2/13/24	12:30	grab	AT-RES-2-522	9	✓	✓	✓	✓	

RELINQUISHED BY <i>W</i>	DATE / TIME 2/13/24 - 2:15 pm	RECEIVED BY Magaly S	DATE / TIME 2-13-24 14:20	SAMPLE CONDITION: Actual Temperature: 5.4 F Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY Magaly S	DATE / TIME 2-13-24 16:12	RECEIVED BY <i>[Signature]</i>	DATE / TIME 2/13/24 16:12		
RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal.
Weck Laboratories is not responsible for verifying compliance monitoring schedules.

JB
2/14/24
COC version 04132016

Sample Receipt Checklist



Weck WKO: **4B13137**
 WKO Logged by: Jerico Bolotano
 Samples Checked by: Jerico Bolotano

Date/Time Received: 02/13/24 @ 16:12
 # of Samples: 13
 Delivered by: RMS

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC				
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		5.4°C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		Wet		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea size?
VOC Headspace: (No) none, If Yes (See comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2; 67108<2; 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Free Chlorine Tested <0.1 (Organic Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cl Test Strip Lot# 11032201
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Amt added:

PM Comments

Sample Receipt Checklist Prepared by:

Signature: Jerico Bolotano

Date: 02/14/24

Work Orders: 4B13138

Project: City of Santa Monica - Background Water Quality

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 4/29/2024

Received Date: 2/13/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

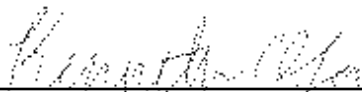
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/13/24 with the Chain-of-Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:46

Case Narrative

This is a Supplement to the Certificate of Analysis previously issued 4/4/2024 for the above referenced Project to report additional metals requested by Steven Shiokari.

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-2-522	Windsor Lee	4B13138-03	Water	02/13/24 12:30	

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 200.8 in Water Uranium, Total	7440-61-1			⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:46

Sample Results

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13138-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Antimony, Total	ND	0.089	0.50	ug/l	1	02/28/24	
Beryllium, Total	ND	0.029	0.10	ug/l	1	02/28/24	
Cadmium, Total	ND	0.042	0.20	ug/l	1	02/28/24	
Chromium, Total	0.20	0.089	0.20	ug/l	1	02/28/24	J
Nickel, Total	ND	0.40	2.0	ug/l	1	02/28/24	
Silver, Total	ND	0.027	0.20	ug/l	1	02/28/24	
Thallium, Total	ND	0.021	0.20	ug/l	1	02/28/24	
Uranium, Total	2.6	0.02	0.20	ug/l	1	02/28/24	
Vanadium, Total	0.40	0.16	0.50	ug/l	1	02/28/24	J
Zinc, Total	ND	1.7	10	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:46

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2097 - EPA 200.8											
Blank (W4B2097-BLK1)						Prepared: 02/26/24 Analyzed: 02/28/24					
Antimony, Total	ND	0.089	0.50	ug/l							
Beryllium, Total	ND	0.029	0.10	ug/l							
Cadmium, Total	ND	0.042	0.20	ug/l							
Chromium, Total	ND	0.089	0.20	ug/l							
Nickel, Total	ND	0.40	2.0	ug/l							
Silver, Total	ND	0.027	0.20	ug/l							
Thallium, Total	ND	0.021	0.20	ug/l							
Uranium, Total	ND	0.02	0.20	ug/l							
Vanadium, Total	ND	0.16	0.50	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W4B2097-BS1)						Prepared: 02/26/24 Analyzed: 02/28/24					
Antimony, Total	50.2	0.089	0.50	ug/l	50.0		100	85-115			
Beryllium, Total	49.3	0.029	0.10	ug/l	50.0		99	85-115			
Cadmium, Total	50.3	0.042	0.20	ug/l	50.0		100	85-115			
Chromium, Total	53.3	0.089	0.20	ug/l	50.0		106	85-115			
Nickel, Total	53.5	0.40	2.0	ug/l	50.0		107	85-115			
Silver, Total	51.3	0.027	0.20	ug/l	50.0		103	85-115			
Thallium, Total	49.6	0.021	0.20	ug/l	50.0		99	85-115			
Uranium, Total	47.5	0.02	0.20	ug/l	50.0		95	85-115			
Vanadium, Total	52.7	0.16	0.50	ug/l	50.0		105	85-115			
Zinc, Total	50.6	1.7	10	ug/l	50.0		101	85-115			
Matrix Spike (W4B2097-MS1)						Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24					
Antimony, Total	51.9	0.089	0.50	ug/l	50.0	0.0892	104	70-130			
Beryllium, Total	50.1	0.029	0.10	ug/l	50.0	ND	100	70-130			
Cadmium, Total	49.2	0.042	0.20	ug/l	50.0	ND	98	70-130			
Chromium, Total	52.1	0.089	0.20	ug/l	50.0	0.403	103	70-130			
Nickel, Total	50.5	0.40	2.0	ug/l	50.0	ND	101	70-130			
Silver, Total	49.8	0.027	0.20	ug/l	50.0	ND	99	70-130			
Thallium, Total	50.3	0.021	0.20	ug/l	50.0	ND	101	70-130			
Uranium, Total	62.6	0.02	0.20	ug/l	50.0	11.4	102	70-130			
Vanadium, Total	54.4	0.16	0.50	ug/l	50.0	2.05	105	70-130			
Zinc, Total	56.5	1.7	10	ug/l	50.0	8.74	95	70-130			
Matrix Spike (W4B2097-MS2)						Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24					
Antimony, Total	50.3	0.089	0.50	ug/l	50.0	ND	100	70-130			
Beryllium, Total	47.5	0.029	0.10	ug/l	50.0	ND	95	70-130			
Cadmium, Total	48.6	0.042	0.20	ug/l	50.0	ND	97	70-130			
Chromium, Total	51.8	0.089	0.20	ug/l	50.0	0.196	103	70-130			
Nickel, Total	50.9	0.40	2.0	ug/l	50.0	ND	102	70-130			
Silver, Total	49.5	0.027	0.20	ug/l	50.0	ND	99	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:46

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Matrix Spike (W4B2097-MS2)			Source: 4B13138-03			Prepared: 02/26/24			Analyzed: 02/28/24		
Thallium, Total	49.6	0.021	0.20	ug/l	50.0	ND	99	70-130			
Uranium, Total	51.8	0.02	0.20	ug/l	50.0	2.63	98	70-130			
Vanadium, Total	52.4	0.16	0.50	ug/l	50.0	0.403	104	70-130			
Zinc, Total	48.7	1.7	10	ug/l	50.0	ND	97	70-130			
Matrix Spike Dup (W4B2097-MSD1)			Source: 4B12117-02			Prepared: 02/26/24			Analyzed: 02/28/24		
Antimony, Total	51.6	0.089	0.50	ug/l	50.0	0.0892	103	70-130	0.6	30	
Beryllium, Total	49.8	0.029	0.10	ug/l	50.0	ND	100	70-130	0.5	30	
Cadmium, Total	49.3	0.042	0.20	ug/l	50.0	ND	99	70-130	0.3	30	
Chromium, Total	52.6	0.089	0.20	ug/l	50.0	0.403	104	70-130	0.9	30	
Nickel, Total	50.5	0.40	2.0	ug/l	50.0	ND	101	70-130	0.1	30	
Silver, Total	49.8	0.027	0.20	ug/l	50.0	ND	99	70-130	0.02	30	
Thallium, Total	50.3	0.021	0.20	ug/l	50.0	ND	100	70-130	0.1	30	
Uranium, Total	62.6	0.02	0.20	ug/l	50.0	11.4	102	70-130	0.08	30	
Vanadium, Total	54.4	0.16	0.50	ug/l	50.0	2.05	105	70-130	0.04	30	
Zinc, Total	56.3	1.7	10	ug/l	50.0	8.74	95	70-130	0.3	30	
Matrix Spike Dup (W4B2097-MSD2)			Source: 4B13138-03			Prepared: 02/26/24			Analyzed: 02/28/24		
Antimony, Total	50.4	0.089	0.50	ug/l	50.0	ND	101	70-130	0.3	30	
Beryllium, Total	47.7	0.029	0.10	ug/l	50.0	ND	95	70-130	0.5	30	
Cadmium, Total	49.0	0.042	0.20	ug/l	50.0	ND	98	70-130	0.7	30	
Chromium, Total	53.1	0.089	0.20	ug/l	50.0	0.196	106	70-130	2	30	
Nickel, Total	52.3	0.40	2.0	ug/l	50.0	ND	105	70-130	3	30	
Silver, Total	50.0	0.027	0.20	ug/l	50.0	ND	100	70-130	1	30	
Thallium, Total	50.1	0.021	0.20	ug/l	50.0	ND	100	70-130	0.9	30	
Uranium, Total	52.2	0.02	0.20	ug/l	50.0	2.63	99	70-130	0.7	30	
Vanadium, Total	53.8	0.16	0.50	ug/l	50.0	0.403	107	70-130	3	30	
Zinc, Total	48.4	1.7	10	ug/l	50.0	ND	97	70-130	0.7	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 10:46

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B13138

Project: City of Santa Monica - Background Water Quality

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 4/04/2024

Received Date: 2/13/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

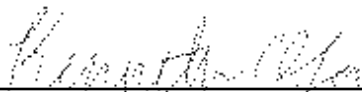
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/13/24 with the Chain-of-Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-2-54	Windsor Lee	4B13138-01	Water	02/13/24 09:05	
AT-GS-2-57	Windsor Lee	4B13138-02	Water	02/13/24 10:45	
AT-RES-2-522	Windsor Lee	4B13138-03	Water	02/13/24 12:30	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B13138-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.26	0.0090	0.10	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.3			AGI	1	03/13/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1091	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:15		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/13/24 20:59	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0091	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 16:02		Analyst: YMT		
Ammonia as N	0.42	0.017	0.10	mg/l	1	03/07/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1092	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:36		Analyst: ism		
Nitrate as N	5.5	0.040	0.20	mg/l	1	02/13/24 20:46	
Nitrite as N	ND	42	100	ug/l	1	02/13/24 20:46	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO ₄ , Total	0.26	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1196	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 13:17		Analyst: kac		
Color	ND		3.0	Color Units	1	02/14/24 16:47	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1268	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 09:45		Analyst: mes		
Alkalinity as CaCO ₃	320	7.2	20	mg/l	1	02/15/24	
Bicarbonate Alkalinity as HCO ₃	390	8.8	24	mg/l	1	02/15/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 20 C	0.364	-20.0	-10.0	LSI	1	03/07/24	
Langelier Index @ 60 C	0.874	-20.0	-10.0	LSI	1	03/07/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B13138-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0581	Preparation: _NONE (METALS)						Analyst: kjo
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	41.1	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	900	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+ -B							
Batch ID: W4B1101	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.35	0.10	0.10	pH Units	1	02/14/24 10:20	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	493	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2096	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	140	1.3	10	ug/l	1	02/28/24	
Calcium, Total	111	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	52.3	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	37	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	38	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2097	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	5.6	4.4	20	ug/l	1	02/28/24	J
Arsenic, Total	0.70	0.074	0.40	ug/l	1	02/28/24	
Barium, Total	54	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	0.29	0.23	0.50	ug/l	1	02/28/24	J
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	27	3.9	20	ug/l	1	02/28/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	13	0.11	1.0	ug/l	1	02/28/24	
Manganese, Total	14	0.23	1.0	ug/l	1	02/28/24	
Potassium, Total	2.5	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	3.7	0.067	0.40	ug/l	1	02/28/24	
Sodium, Total	100	0.10	1.0	mg/l	1	02/28/24	
Strontium, Total	580	0.036	0.20	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B13138-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1156		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: atd	
Heterotrophic Plate Count	170	2.0	2.0	MPN/mL	1	02/15/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1155		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: mdc	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	03/23/24	

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B13138-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1108		Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM	
Sulfate as SO4	230	0.72	1.5	mg/l	3	02/15/24	M-05

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:45 by Windsor Lee

4B13138-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	140	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.33	0.0090	0.10	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.8			AGI	1	03/13/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1091	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:15		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/13/24 20:59	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0091	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 16:02		Analyst: YMT		
Ammonia as N	0.60	0.017	0.10	mg/l	1	03/07/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	0.57	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1092	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:36		Analyst: ism		
Nitrate as N	0.77	0.040	0.20	mg/l	1	02/13/24 20:47	
Nitrite as N	ND	42	100	ug/l	1	02/13/24 20:47	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO ₄ , Total	0.22	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1196	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 13:17		Analyst: kac		
Color	ND		3.0	Color Units	1	02/14/24 16:47	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1268	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 09:45		Analyst: mes		
Alkalinity as CaCO ₃	340	7.2	20	mg/l	1	02/15/24	
Bicarbonate Alkalinity as HCO ₃	410	8.8	24	mg/l	1	02/15/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 20 C	0.812	-20.0	-10.0	LSI	1	03/07/24	
Langelier Index @ 60 C	1.32	-20.0	-10.0	LSI	1	03/07/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:45 by Windsor Lee

4B13138-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0581	Preparation: _NONE (METALS)						Analyst: kjo
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	75.1	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	1100	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+ -B							
Batch ID: W4B1101	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.67	0.10	0.10	pH Units	1	02/14/24 10:23	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	629	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2096	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	220	1.3	10	ug/l	1	02/28/24	
Calcium, Total	149	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	62.2	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	40	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2097	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/28/24	
Arsenic, Total	0.83	0.074	0.40	ug/l	1	02/28/24	
Barium, Total	55	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	2.9	0.23	0.50	ug/l	1	02/28/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	ND	3.9	20	ug/l	1	02/28/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/28/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/28/24	
Potassium, Total	3.2	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	1.9	0.067	0.40	ug/l	1	02/28/24	
Sodium, Total	100	0.10	1.0	mg/l	1	02/28/24	
Strontium, Total	850	0.036	0.20	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:45 by Windsor Lee

4B13138-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1156		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: atd	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/15/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1155		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: blg	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/15/24	

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:45 by Windsor Lee

4B13138-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1108		Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM	
Sulfate as SO4	330	0.96	2.0	mg/l	4	02/15/24	M-05

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13138-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	34	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.74	0.0090	0.10	mg/l	1	02/14/24	
Sulfate as SO4	68	0.24	0.50	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/13/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1107	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 09:35		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/14/24 10:35	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0091	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 16:02		Analyst: YMT		
Ammonia as N	0.86	0.017	0.10	mg/l	1	03/07/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	0.77	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1092	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:36		Analyst: ism		
Nitrate as N	0.46	0.040	0.20	mg/l	1	02/13/24 20:48	
Nitrite as N	ND	42	100	ug/l	1	02/13/24 20:48	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0101	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 17:52		Analyst: rob		
Phosphorus as PO4, Total	0.058	0.021	0.030	mg/l	1	03/07/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1196	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 13:17		Analyst: kac		
Color	ND		3.0	Color Units	1	02/14/24 16:47	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1268	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 09:45		Analyst: mes		
Alkalinity as CaCO3	96	7.2	20	mg/l	1	02/15/24	
Bicarbonate Alkalinity as HCO3	92	8.8	24	mg/l	1	02/15/24	
Carbonate Alkalinity as CaCO3	20	7.2	20	mg/l	1	02/15/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/15/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 20 C	0.345	-20.0	-10.0	LSI	1	03/07/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13138-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 60 C	0.863	-20.0	-10.0	LSI	1	03/07/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)		Prepared: 03/14/24 11:12		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	3.45	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 18:39		Analyst: bel		
Total Dissolved Solids	210	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1101	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 09:07		Analyst: mes		
pH	8.31	0.10	0.10	pH Units	1	02/14/24 10:26	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/26/24 11:37		Analyst: kvm		
Hardness as CaCO3, Total	117	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2096	Preparation: EPA 200.2		Prepared: 02/26/24 11:37		Analyst: kvm		
Boron, Total	140	1.3	10	ug/l	1	02/28/24	
Calcium, Total	27.9	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	11.6	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	8.0	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	8.1	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097	Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/28/24	
Arsenic, Total	0.28	0.074	0.40	ug/l	1	02/28/24	J
Barium, Total	10	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/28/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	ND	3.9	20	ug/l	1	02/28/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/28/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/28/24	
Potassium, Total	0.77	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	0.40	0.067	0.40	ug/l	1	02/28/24	J
Sodium, Total	34	0.10	1.0	mg/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13138-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Strontium, Total	150	0.036	0.20	ug/l	1	02/28/24	
Microbiological Parameters by Standard Methods							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1156		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: atd	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/15/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1155		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: blg	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/15/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results BSK Associates Laboratory Fresno

Sample: AT-GS-2-54
4B13138-01 (Water)

Sampled: 02/13/24 9:05 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	78		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	104%		90-115			03/06/24	HT1.0
Dichloroacetate	104%		90-115			03/06/24	

Method: EPA 317.0 **Batch ID:** AHC0135 **Prepared:** 03/07/24 20:15 **Analyst:** DXR
Bromate ND 1.0 ug/L 1 03/07/24

General Chemistry

Method: EPA 300.0 **Batch ID:** AHC0060 **Prepared:** 03/01/24 16:00 **Analyst:** AAS
Bromide 0.62 0.010 mg/L 1 03/01/24

Sample: AT-GS-2-57
4B13138-02 (Water)

Sampled: 02/13/24 10:45 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	440		25	ug/L	5	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	97%		90-115			03/06/24	HT1.0
Dichloroacetate	103%		90-115			03/06/24	

Method: EPA 317.0 **Batch ID:** AHC0135 **Prepared:** 03/07/24 20:28 **Analyst:** DXR
Bromate ND 1.0 ug/L 1 03/07/24

General Chemistry

Method: EPA 300.0 **Batch ID:** AHC0152 **Prepared:** 03/04/24 17:28 **Analyst:** AAS
Bromide 1.2 0.020 mg/L 2 03/04/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Sample Results (Continued)

Sample: AT-RES-2-522 Sampled: 02/13/24 12:30 by Windsor Lee
 4B13138-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0219		Prepared: 03/06/24 03:02				Analyst: DXR
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	270		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	96%		90-115			03/06/24	HT1.0
Dichloroacetate	96%		90-115			03/06/24	
Method: EPA 317.0	Batch ID: AHC0135		Prepared: 03/07/24 20:40				Analyst: DXR
Bromate	ND		1.0	ug/L	1	03/07/24	
General Chemistry							
Method: EPA 300.0	Batch ID: AHC0060		Prepared: 03/01/24 16:00				Analyst: AAS
Bromide	0.69		0.010	mg/L	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: AHC0135 - EPA 317.0									
Blank (AHC0135-BLK1) Prepared & Analyzed: 03/07/24									
Bromate	ND	1.0	ug/L						
LCS (AHC0135-BS1) Prepared & Analyzed: 03/07/24									
Bromate	9.8	1.0	ug/L	10.0		98 85-115			
LCS Dup (AHC0135-BSD1) Prepared & Analyzed: 03/07/24									
Bromate	9.9	1.0	ug/L	10.0		99 85-115	1	10	
Matrix Spike (AHC0135-MS1) Source: AHB3420-02 Prepared & Analyzed: 03/07/24									
Bromate	9.5	1.0	ug/L	10.0	ND	95 75-125			
Matrix Spike Dup (AHC0135-MSD1) Source: AHB3420-02 Prepared & Analyzed: 03/07/24									
Bromate	9.7	1.0	ug/L	10.0	ND	97 75-125	2	10	
Batch: AHC0219 - EPA 300.1									
Blank (AHC0219-BLK1) Prepared & Analyzed: 03/05/24									
Chlorate	ND	5.0	ug/L						
Chlorite	ND	0.0050	mg/L						
<i>Surrogate(s)</i>									
Dichloroacetate	0.508		mg/L	0.500		102 90-115			
Dichloroacetate	508		ug/L	500		102 90-115			
LCS (AHC0219-BS1) Prepared & Analyzed: 03/05/24									
Chlorate	200	5.0	ug/L	200		100 85-115			
Chlorite	0.21	0.0050	mg/L	0.200		105 85-115			
<i>Surrogate(s)</i>									
Dichloroacetate	0.512		mg/L	0.500		102 90-115			
Dichloroacetate	512		ug/L	500		102 90-115			
LCS Dup (AHC0219-BSD1) Prepared & Analyzed: 03/05/24									
Chlorate	200	5.0	ug/L	200		100 85-115	0.1	10	
Chlorite	0.21	0.0050	mg/L	0.200		103 85-115	2	10	
<i>Surrogate(s)</i>									
Dichloroacetate	0.525		mg/L	0.500		105 90-115			
Dichloroacetate	525		ug/L	500		105 90-115			
Matrix Spike (AHC0219-MS1) Source: AHB3420-01 Prepared & Analyzed: 03/05/24									
Chlorate	100	5.0	ug/L	100	ND	104 75-125			
Chlorite	0.10	0.0050	mg/L	0.100	ND	104 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.549		mg/L	0.500		110 90-115			
Dichloroacetate	549		ug/L	500		110 90-115			
Matrix Spike (AHC0219-MS2) Source: AHC0050-01 Prepared & Analyzed: 03/06/24									
Chlorate	100	5.0	ug/L	100	ND	105 75-125			
Chlorite	0.097	0.0050	mg/L	0.100	ND	97 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.521		mg/L	0.500		104 90-115			
Dichloroacetate	521		ug/L	500		104 90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0219 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0219-MSD1)			Source: AHB3420-01		Prepared & Analyzed: 03/05/24					
Chlorate	99	5.0	ug/L	100	ND	99	75-125	5	10	
Chlorite	0.10	0.0050	mg/L	0.100	ND	105	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.555		mg/L	0.500		111	90-115			
Dichloroacetate	555		ug/L	500		111	90-115			
Matrix Spike Dup (AHC0219-MSD2)			Source: AHC0050-01		Prepared & Analyzed: 03/06/24					
Chlorate	100	5.0	ug/L	100	ND	104	75-125	0.9	10	
Chlorite	0.096	0.0050	mg/L	0.100	ND	96	75-125	1	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.509		mg/L	0.500		102	90-115			
Dichloroacetate	509		ug/L	500		102	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0060 - EPA 300.0										
Blank (AHC0060-BLK1)			Prepared & Analyzed: 03/01/24							
Bromide	ND	0.010	mg/L							
LCS (AHC0060-BS1)			Prepared & Analyzed: 03/01/24							
Bromide	0.19	0.010	mg/L	0.200		96	90-110			
Matrix Spike (AHC0060-MS1)			Source: AHB3708-01		Prepared & Analyzed: 03/01/24					
Bromide	0.096	0.010	mg/L	0.100	ND	96	80-120			
Matrix Spike (AHC0060-MS2)			Source: AHC0055-03		Prepared & Analyzed: 03/01/24					
Bromide	0.40	0.010	mg/L	0.100	0.34	60	80-120			MS1.0
Matrix Spike Dup (AHC0060-MSD1)			Source: AHB3708-01		Prepared & Analyzed: 03/01/24					
Bromide	0.097	0.010	mg/L	0.100	ND	97	80-120	1	10	
Matrix Spike Dup (AHC0060-MSD2)			Source: AHC0055-03		Prepared & Analyzed: 03/01/24					
Bromide	0.41	0.010	mg/L	0.100	0.34	69	80-120	2	10	MS1.0
Batch: AHC0152 - EPA 300.0										
Blank (AHC0152-BLK1)			Prepared & Analyzed: 03/04/24							
Bromide	ND	0.010	mg/L							
LCS (AHC0152-BS1)			Prepared & Analyzed: 03/04/24							
Bromide	0.19	0.010	mg/L	0.200		95	90-110			
Matrix Spike (AHC0152-MS1)			Source: AHC0045-05RE1		Prepared & Analyzed: 03/04/24					
Bromide	1.2	0.020	mg/L	0.200	1.1	44	80-120			MS1.0
Matrix Spike Dup (AHC0152-MSD1)			Source: AHC0045-05RE1		Prepared & Analyzed: 03/04/24					
Bromide	1.2	0.020	mg/L	0.200	1.1	49	80-120	0.9	10	MS1.0

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1108 - EPA 300.0											
Blank (W4B1108-BLK1)					Prepared & Analyzed: 02/14/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1108-BS1)					Prepared & Analyzed: 02/14/24						
Chloride, Total	20.1	0.19	0.50	mg/l	20.0		100	90-110			
Fluoride, Total	1.92	0.0090	0.10	mg/l	2.00		96	90-110			
Sulfate as SO4	19.8	0.24	0.50	mg/l	20.0		99	90-110			
Matrix Spike (W4B1108-MS1)					Source: 4B13114-01 Prepared & Analyzed: 02/14/24						
Chloride, Total	264	1.9	5.0	mg/l	200	52.5	106	76-118			
Fluoride, Total	20.0	0.090	1.0	mg/l	20.0	0.266	99	90-107			
Sulfate as SO4	263	2.4	5.0	mg/l	200	54.0	105	84-111			
Matrix Spike (W4B1108-MS2)					Source: 4B13114-02 Prepared & Analyzed: 02/14/24						
Chloride, Total	275	1.9	5.0	mg/l	200	60.8	107	76-118			
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.265	100	90-107			
Sulfate as SO4	262	2.4	5.0	mg/l	200	50.4	106	84-111			
Matrix Spike Dup (W4B1108-MSD1)					Source: 4B13114-01 Prepared & Analyzed: 02/14/24						
Chloride, Total	265	1.9	5.0	mg/l	200	52.5	106	76-118	0.2	20	
Fluoride, Total	20.1	0.090	1.0	mg/l	20.0	0.266	99	90-107	0.5	10	
Sulfate as SO4	264	2.4	5.0	mg/l	200	54.0	105	84-111	0.3	20	
Matrix Spike Dup (W4B1108-MSD2)					Source: 4B13114-02 Prepared & Analyzed: 02/14/24						
Chloride, Total	275	1.9	5.0	mg/l	200	60.8	107	76-118	0.2	20	
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.265	100	90-107	0	10	
Sulfate as SO4	261	2.4	5.0	mg/l	200	50.4	105	84-111	0.2	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1091 - EPA 140.1										
Blank (W4B1091-BLK1) Prepared & Analyzed: 02/13/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1091-DUP1) Source: 4A29014-02 Prepared & Analyzed: 02/13/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Duplicate (W4B1091-DUP2) Source: 4A29014-12 Prepared & Analyzed: 02/13/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1092 - EPA 353.2										
Blank (W4B1092-BLK1) Prepared & Analyzed: 02/13/24										
Nitrate as N	ND	0.040	0.10	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B1092-BS1) Prepared & Analyzed: 02/13/24										
Nitrate as N	1.01	0.040	0.10	mg/l	1.00		101 90-110			
Nitrite as N	982	42	100	ug/l	1000		98 90-110			
Matrix Spike (W4B1092-MS1) Source: 3L15016-07 Prepared & Analyzed: 02/13/24										
Nitrate as N	5.61	0.040	0.10	mg/l	2.00	3.57	102 90-110			
Nitrite as N	1000	42	100	ug/l	1000	ND	100 90-110			
Matrix Spike Dup (W4B1092-MSD1) Source: 3L15016-07 Prepared & Analyzed: 02/13/24										
Nitrate as N	5.61	0.040	0.10	mg/l	2.00	3.57	102 90-110	0	10	
Nitrite as N	1010	42	100	ug/l	1000	ND	101 90-110	1	15	
Batch: W4B1101 - SM 4500H+-B										
LCS (W4B1101-BS1) Prepared & Analyzed: 02/14/24										
pH	6.95	0.10	0.10	pH Units	6.86		101 98.8-101			
Duplicate (W4B1101-DUP1) Source: 4B08003-01 Prepared & Analyzed: 02/14/24										
pH	8.52	0.10	0.10	pH Units		8.27		3	3.1	
Batch: W4B1107 - EPA 140.1										
Blank (W4B1107-BLK1) Prepared & Analyzed: 02/14/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1107-DUP1) Source: 4B13077-01 Prepared & Analyzed: 02/14/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Duplicate (W4B1107-DUP2) Source: 4B13077-02 Prepared & Analyzed: 02/14/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1196 - SM 2120B										
LCS (W4B1196-BS1) Prepared & Analyzed: 02/14/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1196-DUP1) Source: 4B13140-02 Prepared & Analyzed: 02/14/24										
Color	ND		3.0	Color Units		ND			10	
Duplicate (W4B1196-DUP2) Source: 4B13140-03 Prepared & Analyzed: 02/14/24										
Color	ND		3.0	Color Units		ND			10	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1233 - SM 2540C											
Blank (W4B1233-BLK1)											
Total Dissolved Solids	ND	4.0	10	mg/l	Prepared: 02/14/24 Analyzed: 02/15/24						
LCS (W4B1233-BS1)											
Total Dissolved Solids	801	4.0	10	mg/l	824		97	97-103			
Duplicate (W4B1233-DUP1)											
Total Dissolved Solids	1760	4.0	10	mg/l		1700			3	10	
Duplicate (W4B1233-DUP2)											
Total Dissolved Solids	1390	4.0	10	mg/l		1410			2	10	
Batch: W4B1268 - SM 2320B											
Blank (W4B1268-BLK1)											
Alkalinity as CaCO3	ND	7.2	20	mg/l	Prepared & Analyzed: 02/15/24						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l							
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l							
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l							
LCS (W4B1268-BS1)											
Alkalinity as CaCO3	86.3	7.2	20	mg/l	87.8		98	94-108			
Bicarbonate Alkalinity as HCO3	105	8.8	24	mg/l	107		98	95-108			
Duplicate (W4B1268-DUP1)											
Alkalinity as CaCO3	77.7	7.2	20	mg/l		77.6			0.1	15	
Bicarbonate Alkalinity as HCO3	94.8	8.8	24	mg/l		94.7			0.1	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Batch: W4B2385 - EPA 365.3											
Blank (W4B2385-BLK1)											
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l	Prepared: 02/28/24 Analyzed: 03/04/24						
LCS (W4B2385-BS1)											
Phosphorus as PO4, Total	0.596	0.021	0.030	mg/l	0.612		97	90-110			
Matrix Spike (W4B2385-MS1)											
Phosphorus as PO4, Total	0.711	0.021	0.030	mg/l	0.612	0.124	96	90-110			
Matrix Spike Dup (W4B2385-MSD1)											
Phosphorus as PO4, Total	0.730	0.021	0.030	mg/l	0.612	0.124	99	90-110	3	20	
Batch: W4C0062 - EPA 351.2											
Blank (W4C0062-BLK1)											
TKN	ND	0.065	0.10	mg/l	Prepared: 03/01/24 Analyzed: 03/05/24						
Blank (W4C0062-BLK2)											
TKN	ND	0.065	0.10	mg/l	Prepared: 03/01/24 Analyzed: 03/05/24						
LCS (W4C0062-BS1)											
TKN	0.939	0.065	0.10	mg/l	1.00		94	90-110			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0062 - EPA 351.2 (Continued)											
LCS (W4C0062-BS2)					Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	0.918	0.065	0.10	mg/l	1.00		92	90-110			
Matrix Spike (W4C0062-MS1)					Source: 4B14109-02 Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	3.04	0.13	0.20	mg/l	2.00	1.19	93	90-110			
Matrix Spike (W4C0062-MS2)					Source: 4B29072-01 Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	1.72	0.065	0.10	mg/l	1.00	0.750	97	90-110			
Matrix Spike Dup (W4C0062-MSD1)					Source: 4B14109-02 Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	3.09	0.13	0.20	mg/l	2.00	1.19	95	90-110	1	10	
Matrix Spike Dup (W4C0062-MSD2)					Source: 4B29072-01 Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	1.71	0.065	0.10	mg/l	1.00	0.750	96	90-110	0.6	10	
Batch: W4C0091 - EPA 350.1											
Blank (W4C0091-BLK1)					Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W4C0091-BLK2)					Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W4C0091-BS1)					Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.243	0.017	0.10	mg/l	0.250		97	90-110			
LCS (W4C0091-BS2)					Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.246	0.017	0.10	mg/l	0.250		98	90-110			
Matrix Spike (W4C0091-MS1)					Source: 4B02010-12 Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.375	0.017	0.10	mg/l	0.250	0.141	94	90-110			
Matrix Spike (W4C0091-MS2)					Source: 4B13138-01 Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.650	0.017	0.10	mg/l	0.250	0.416	94	90-110			
Matrix Spike Dup (W4C0091-MSD1)					Source: 4B02010-12 Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.379	0.017	0.10	mg/l	0.250	0.141	95	90-110	1	15	
Matrix Spike Dup (W4C0091-MSD2)					Source: 4B13138-01 Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.644	0.017	0.10	mg/l	0.250	0.416	91	90-110	0.8	15	
Batch: W4C0101 - EPA 365.3											
Blank (W4C0101-BLK1)					Prepared: 03/01/24 Analyzed: 03/07/24						
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W4C0101-BS1)					Prepared: 03/01/24 Analyzed: 03/07/24						
Phosphorus as PO4, Total	0.601	0.021	0.030	mg/l	0.612		98	90-110			
Matrix Spike (W4C0101-MS1)					Source: 4B13116-02 Prepared: 03/01/24 Analyzed: 03/07/24						
Phosphorus as PO4, Total	1.24	0.021	0.030	mg/l	0.612	0.662	95	90-110			
Matrix Spike Dup (W4C0101-MSD1)					Source: 4B13116-02 Prepared: 03/01/24 Analyzed: 03/07/24						
Phosphorus as PO4, Total	1.26	0.021	0.030	mg/l	0.612	0.662	97	90-110	1	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2096 - EPA 200.7											
Blank (W4B2096-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24						
Boron, Total	ND	1.3	10	ug/l							
Calcium, Total	ND	0.0240	0.500	mg/l							
Magnesium, Total	ND	0.0148	0.500	mg/l							
Silica as SiO ₂ , Dissolved	ND	0.0086	0.10	mg/l							
Silica as SiO ₂ , Total	ND	0.0086	0.10	mg/l							
LCS (W4B2096-BS1)					Prepared: 02/26/24 Analyzed: 02/28/24						
Boron, Total	225	1.3	10	ug/l	200	112	85-115				
Calcium, Total	47.9	0.0240	0.500	mg/l	50.2	96	85-115				
Magnesium, Total	48.1	0.0148	0.500	mg/l	50.2	96	85-115				
Silica as SiO ₂ , Dissolved	43.7	0.0086	0.10	mg/l	43.2	101	85-115				
Silica as SiO ₂ , Total	43.7	0.0086	0.10	mg/l	43.2	101	85-115				
Matrix Spike (W4B2096-MS1)					Source: 4B12117-01 Prepared: 02/26/24 Analyzed: 02/28/24						
Boron, Total	366	1.3	10	ug/l	200	139	114	70-130			
Calcium, Total	155	0.0240	0.500	mg/l	50.2	110	89	70-130			
Magnesium, Total	98.7	0.0148	0.500	mg/l	50.2	51.7	94	70-130			
Silica as SiO ₂ , Dissolved	81.1	0.0086	0.10	mg/l	43.2	38.3	99	70-130			
Silica as SiO ₂ , Total	81.1	0.0086	0.10	mg/l	43.2	38.1	100	70-130			
Matrix Spike (W4B2096-MS2)					Source: 4B13138-01 Prepared: 02/26/24 Analyzed: 02/28/24						
Boron, Total	376	1.3	10	ug/l	200	138	119	70-130			
Calcium, Total	159	0.0240	0.500	mg/l	50.2	111	95	70-130			
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.3	98	70-130			
Silica as SiO ₂ , Dissolved	83.2	0.0086	0.10	mg/l	43.2	36.7	108	70-130			
Silica as SiO ₂ , Total	83.2	0.0086	0.10	mg/l	43.2	37.5	106	70-130			
Matrix Spike Dup (W4B2096-MSD1)					Source: 4B12117-01 Prepared: 02/26/24 Analyzed: 02/28/24						
Boron, Total	373	1.3	10	ug/l	200	139	117	70-130	2	30	
Calcium, Total	157	0.0240	0.500	mg/l	50.2	110	94	70-130	2	30	
Magnesium, Total	100	0.0148	0.500	mg/l	50.2	51.7	97	70-130	2	30	
Silica as SiO ₂ , Dissolved	83.3	0.0086	0.10	mg/l	43.2	38.3	104	70-130	3	30	
Silica as SiO ₂ , Total	83.3	0.0086	0.10	mg/l	43.2	38.1	105	70-130	3	30	
Matrix Spike Dup (W4B2096-MSD2)					Source: 4B13138-01 Prepared: 02/26/24 Analyzed: 02/28/24						
Boron, Total	375	1.3	10	ug/l	200	138	118	70-130	0.2	30	
Calcium, Total	159	0.0240	0.500	mg/l	50.2	111	95	70-130	0.1	30	
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.3	97	70-130	0.2	30	
Silica as SiO ₂ , Dissolved	83.2	0.0086	0.10	mg/l	43.2	36.7	108	70-130	0.06	30	
Silica as SiO ₂ , Total	83.2	0.0086	0.10	mg/l	43.2	37.5	106	70-130	0.06	30	
Batch: W4B2097 - EPA 200.8											
Blank (W4B2097-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24						
Aluminum, Total	ND	4.4	20	ug/l							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Blank (W4B2097-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24						
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W4B2097-BS1)											
					Prepared: 02/26/24 Analyzed: 02/28/24						
Aluminum, Total	48.0	4.4	20	ug/l	50.0		96	85-115			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	48.5	0.14	1.0	ug/l	50.0		97	85-115			
Copper, Total	53.2	0.23	0.50	ug/l	50.0		106	85-115			
Iron, Dissolved	1210	3.9	20	ug/l	1050		115	85-115			
Iron, Total	1210	3.9	20	ug/l	1050		115	85-115			
Lead, Total	50.3	0.083	0.20	ug/l	50.0		101	85-115			
Manganese, Dissolved	52.3	0.11	1.0	ug/l	50.0		105	85-115			
Manganese, Total	52.3	0.23	1.0	ug/l	50.0		105	85-115			
Potassium, Total	2.11	0.068	0.50	mg/l	2.05		103	85-115			
Selenium, Total	50.5	0.067	0.40	ug/l	50.0		101	85-115			
Sodium, Total	2.18	0.10	1.0	mg/l	2.05		106	85-115			
Strontium, Total	48.2	0.036	0.20	ug/l	50.0		96	85-115			
Matrix Spike (W4B2097-MS1)											
					Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24						
Aluminum, Total	46.9	4.4	20	ug/l	50.0	ND	94	70-130			
Arsenic, Total	51.5	0.074	0.40	ug/l	50.0	0.653	102	70-130			
Barium, Total	103	0.14	1.0	ug/l	50.0	52.3	102	70-130			
Copper, Total	51.4	0.23	0.50	ug/l	50.0	1.93	99	70-130			
Iron, Dissolved	1130	3.9	20	ug/l	1050	ND	108	70-130			
Iron, Total	1130	3.9	20	ug/l	1050	4.77	107	70-130			
Lead, Total	50.7	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	50.3	0.11	1.0	ug/l	50.0	0.114	100	70-130			
Manganese, Total	50.3	0.23	1.0	ug/l	50.0	0.320	100	70-130			
Potassium, Total	5.10	0.068	0.50	mg/l	2.05	3.10	98	70-130			
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	1.24	97	70-130			
Sodium, Total	94.0	0.10	1.0	mg/l	2.05	93.0	48	70-130			

MS-02

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Matrix Spike (W4B2097-MS1) Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24											
Strontium, Total	845	0.036	0.20	ug/l	50.0	808	74	70-130			
Matrix Spike (W4B2097-MS2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	47.9	4.4	20	ug/l	50.0	ND	96	70-130			
Arsenic, Total	50.1	0.074	0.40	ug/l	50.0	0.283	100	70-130			
Barium, Total	59.6	0.14	1.0	ug/l	50.0	10.2	99	70-130			
Copper, Total	50.8	0.23	0.50	ug/l	50.0	ND	101	70-130			
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130			
Iron, Total	1140	3.9	20	ug/l	1050	ND	109	70-130			
Lead, Total	49.6	0.083	0.20	ug/l	50.0	ND	99	70-130			
Manganese, Dissolved	50.6	0.11	1.0	ug/l	50.0	ND	101	70-130			
Manganese, Total	50.6	0.23	1.0	ug/l	50.0	ND	101	70-130			
Potassium, Total	2.76	0.068	0.50	mg/l	2.05	0.772	97	70-130			
Selenium, Total	48.4	0.067	0.40	ug/l	50.0	0.399	96	70-130			
Sodium, Total	33.3	0.10	1.0	mg/l	2.05	33.8	NR	70-130			MS-02
Strontium, Total	191	0.036	0.20	ug/l	50.0	147	89	70-130			
Matrix Spike Dup (W4B2097-MSD1) Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	47.9	4.4	20	ug/l	50.0	ND	96	70-130	2	30	
Arsenic, Total	51.6	0.074	0.40	ug/l	50.0	0.653	102	70-130	0.09	30	
Barium, Total	104	0.14	1.0	ug/l	50.0	52.3	103	70-130	0.6	30	
Copper, Total	51.6	0.23	0.50	ug/l	50.0	1.93	99	70-130	0.4	30	
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130	1	30	
Iron, Total	1140	3.9	20	ug/l	1050	4.77	109	70-130	1	30	
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101	70-130	0.3	30	
Manganese, Dissolved	50.0	0.11	1.0	ug/l	50.0	0.114	100	70-130	0.5	30	
Manganese, Total	50.0	0.23	1.0	ug/l	50.0	0.320	99	70-130	0.5	30	
Potassium, Total	5.12	0.068	0.50	mg/l	2.05	3.10	99	70-130	0.3	30	
Selenium, Total	50.3	0.067	0.40	ug/l	50.0	1.24	98	70-130	1	30	
Sodium, Total	94.6	0.10	1.0	mg/l	2.05	93.0	77	70-130	0.7	30	
Strontium, Total	860	0.036	0.20	ug/l	50.0	808	103	70-130	2	30	
Matrix Spike Dup (W4B2097-MSD2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	48.4	4.4	20	ug/l	50.0	ND	97	70-130	1	30	
Arsenic, Total	50.2	0.074	0.40	ug/l	50.0	0.283	100	70-130	0.3	30	
Barium, Total	59.8	0.14	1.0	ug/l	50.0	10.2	99	70-130	0.2	30	
Copper, Total	51.8	0.23	0.50	ug/l	50.0	ND	104	70-130	2	30	
Iron, Dissolved	1150	3.9	20	ug/l	1050	ND	109	70-130	0.4	30	
Iron, Total	1150	3.9	20	ug/l	1050	ND	109	70-130	0.4	30	
Lead, Total	50.0	0.083	0.20	ug/l	50.0	ND	100	70-130	0.9	30	
Manganese, Dissolved	51.7	0.11	1.0	ug/l	50.0	ND	103	70-130	2	30	
Manganese, Total	51.7	0.23	1.0	ug/l	50.0	ND	103	70-130	2	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B2097-MSD2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Potassium, Total	2.82	0.068	0.50	mg/l	2.05	0.772	100	70-130	2	30	
Selenium, Total	48.7	0.067	0.40	ug/l	50.0	0.399	97	70-130	0.7	30	
Sodium, Total	34.9	0.10	1.0	mg/l	2.05	33.8	53	70-130	5	30	MS-02
Strontium, Total	193	0.036	0.20	ug/l	50.0	147	92	70-130	0.8	30	

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1155 - SM 9221B											
Blank (W4B1155-BLK1) Prepared: 02/13/24 Analyzed: 03/23/24											
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Calculation is based on source temperature @20C
HT1.0	Holding time exceeded. Sample was received at the lab past holding time.
J	Estimated conc. detected <MRL and >MDL.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B13138

Report Date: 4/04/2024

Received Date: 2/13/2024

Project: City of Santa Monica - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

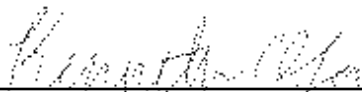
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/13/24 with the Chain-of-Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-2-54	Windsor Lee	4B13138-01	Water	02/13/24 09:05	
AT-GS-2-57	Windsor Lee	4B13138-02	Water	02/13/24 10:45	
AT-RES-2-522	Windsor Lee	4B13138-03	Water	02/13/24 12:30	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B13138-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.26	0.0090	0.10	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.3			AGI	1	03/13/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1091	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:15		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/13/24 20:59	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0091	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 16:02		Analyst: YMT		
Ammonia as N	0.42	0.017	0.10	mg/l	1	03/07/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1092	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:36		Analyst: ism		
Nitrate as N	5.5	0.040	0.20	mg/l	1	02/13/24 20:46	
Nitrite as N	ND	42	100	ug/l	1	02/13/24 20:46	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO ₄ , Total	0.26	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1196	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 13:17		Analyst: kac		
Color	ND		3.0	Color Units	1	02/14/24 16:47	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1268	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 09:45		Analyst: mes		
Alkalinity as CaCO ₃	320	7.2	20	mg/l	1	02/15/24	
Bicarbonate Alkalinity as HCO ₃	390	8.8	24	mg/l	1	02/15/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 20 C	0.364	-20.0	-10.0	LSI	1	03/07/24	
Langelier Index @ 60 C	0.874	-20.0	-10.0	LSI	1	03/07/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B13138-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0581	Preparation: _NONE (METALS)						Analyst: kjo
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	41.1	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	900	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+ -B							
Batch ID: W4B1101	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.35	0.10	0.10	pH Units	1	02/14/24 10:20	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	493	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2096	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	140	1.3	10	ug/l	1	02/28/24	
Calcium, Total	111	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	52.3	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	37	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	38	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2097	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	5.6	4.4	20	ug/l	1	02/28/24	J
Arsenic, Total	0.70	0.074	0.40	ug/l	1	02/28/24	
Barium, Total	54	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	0.29	0.23	0.50	ug/l	1	02/28/24	J
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	27	3.9	20	ug/l	1	02/28/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	13	0.11	1.0	ug/l	1	02/28/24	
Manganese, Total	14	0.23	1.0	ug/l	1	02/28/24	
Potassium, Total	2.5	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	3.7	0.067	0.40	ug/l	1	02/28/24	
Sodium, Total	100	0.10	1.0	mg/l	1	02/28/24	
Strontium, Total	580	0.036	0.20	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B13138-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1156		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: atd	
Heterotrophic Plate Count	170	2.0	2.0	MPN/mL	1	02/15/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1155		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: mdc	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	03/23/24	

Sample Results

(Continued)

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B13138-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1108		Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM	
Sulfate as SO4	230	0.72	1.5	mg/l	3	02/15/24	M-05

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:45 by Windsor Lee

4B13138-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	140	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.33	0.0090	0.10	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.8			AGI	1	03/13/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1091	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:15		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/13/24 20:59	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0091	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 16:02		Analyst: YMT		
Ammonia as N	0.60	0.017	0.10	mg/l	1	03/07/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	0.57	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1092	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:36		Analyst: ism		
Nitrate as N	0.77	0.040	0.20	mg/l	1	02/13/24 20:47	
Nitrite as N	ND	42	100	ug/l	1	02/13/24 20:47	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4B2385	Preparation: _NONE (WETCHEM)		Prepared: 02/28/24 14:32		Analyst: rob		
Phosphorus as PO ₄ , Total	0.22	0.021	0.030	mg/l	1	03/04/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1196	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 13:17		Analyst: kac		
Color	ND		3.0	Color Units	1	02/14/24 16:47	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1268	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 09:45		Analyst: mes		
Alkalinity as CaCO ₃	340	7.2	20	mg/l	1	02/15/24	
Bicarbonate Alkalinity as HCO ₃	410	8.8	24	mg/l	1	02/15/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 20 C	0.812	-20.0	-10.0	LSI	1	03/07/24	
Langelier Index @ 60 C	1.32	-20.0	-10.0	LSI	1	03/07/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:45 by Windsor Lee

4B13138-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0581	Preparation: _NONE (METALS)						Analyst: kjo
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	75.1	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	1100	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+ -B							
Batch ID: W4B1101	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.67	0.10	0.10	pH Units	1	02/14/24 10:23	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	629	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2096	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	220	1.3	10	ug/l	1	02/28/24	
Calcium, Total	149	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	62.2	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	40	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2097	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/28/24	
Arsenic, Total	0.83	0.074	0.40	ug/l	1	02/28/24	
Barium, Total	55	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	2.9	0.23	0.50	ug/l	1	02/28/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	ND	3.9	20	ug/l	1	02/28/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/28/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/28/24	
Potassium, Total	3.2	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	1.9	0.067	0.40	ug/l	1	02/28/24	
Sodium, Total	100	0.10	1.0	mg/l	1	02/28/24	
Strontium, Total	850	0.036	0.20	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:45 by Windsor Lee

4B13138-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1156		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: atd	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/15/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1155		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: blg	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/15/24	

Sample Results

(Continued)

Sample: AT-GS-2-57

Sampled: 02/13/24 10:45 by Windsor Lee

4B13138-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1108		Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM	
Sulfate as SO4	330	0.96	2.0	mg/l	4	02/15/24	M-05

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13138-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1108	Preparation: _NONE (LC)		Prepared: 02/14/24 09:38		Analyst: CAM		
Chloride, Total	34	0.19	0.50	mg/l	1	02/14/24	
Fluoride, Total	0.74	0.0090	0.10	mg/l	1	02/14/24	
Sulfate as SO4	68	0.24	0.50	mg/l	1	02/14/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/13/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1107	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 09:35		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/14/24 10:35	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0091	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 16:02		Analyst: YMT		
Ammonia as N	0.86	0.017	0.10	mg/l	1	03/07/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0062	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 11:22		Analyst: YMT		
TKN	0.77	0.065	0.10	mg/l	1	03/05/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1092	Preparation: _NONE (WETCHEM)		Prepared: 02/13/24 19:36		Analyst: ism		
Nitrate as N	0.46	0.040	0.20	mg/l	1	02/13/24 20:48	
Nitrite as N	ND	42	100	ug/l	1	02/13/24 20:48	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0101	Preparation: _NONE (WETCHEM)		Prepared: 03/01/24 17:52		Analyst: rob		
Phosphorus as PO4, Total	0.058	0.021	0.030	mg/l	1	03/07/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1196	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 13:17		Analyst: kac		
Color	ND		3.0	Color Units	1	02/14/24 16:47	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1268	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 09:45		Analyst: mes		
Alkalinity as CaCO3	96	7.2	20	mg/l	1	02/15/24	
Bicarbonate Alkalinity as HCO3	92	8.8	24	mg/l	1	02/15/24	
Carbonate Alkalinity as CaCO3	20	7.2	20	mg/l	1	02/15/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/15/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 20 C	0.345	-20.0	-10.0	LSI	1	03/07/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13138-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 60 C	0.863	-20.0	-10.0	LSI	1	03/07/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)		Prepared: 03/14/24 11:12		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	3.45	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 18:39		Analyst: bel		
Total Dissolved Solids	210	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1101	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 09:07		Analyst: mes		
pH	8.31	0.10	0.10	pH Units	1	02/14/24 10:26	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/26/24 11:37		Analyst: kvm		
Hardness as CaCO3, Total	117	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2096	Preparation: EPA 200.2		Prepared: 02/26/24 11:37		Analyst: kvm		
Boron, Total	140	1.3	10	ug/l	1	02/28/24	
Calcium, Total	27.9	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	11.6	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	8.0	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	8.1	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097	Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/28/24	
Arsenic, Total	0.28	0.074	0.40	ug/l	1	02/28/24	J
Barium, Total	10	0.14	1.0	ug/l	1	02/28/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/28/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/28/24	
Iron, Total	ND	3.9	20	ug/l	1	02/28/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/28/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/28/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/28/24	
Potassium, Total	0.77	0.068	0.50	mg/l	1	02/28/24	
Selenium, Total	0.40	0.067	0.40	ug/l	1	02/28/24	J
Sodium, Total	34	0.10	1.0	mg/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Sample Results

(Continued)

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B13138-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2097		Preparation: EPA 200.2		Prepared: 02/26/24 16:39		Analyst: tyc	
Strontium, Total	150	0.036	0.20	ug/l	1	02/28/24	
Microbiological Parameters by Standard Methods							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1156		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: atd	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/15/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1155		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/13/24 17:05		Analyst: blg	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/15/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results BSK Associates Laboratory Fresno

Sample: AT-GS-2-54
4B13138-01 (Water)

Sampled: 02/13/24 9:05 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	78		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	104%		90-115			03/06/24	HT1.0
Dichloroacetate	104%		90-115			03/06/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/07/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.62		0.010	mg/L	1	03/01/24	

Sample: AT-GS-2-57
4B13138-02 (Water)

Sampled: 02/13/24 10:45 by Windsor Lee

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	440		25	ug/L	5	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	97%		90-115			03/06/24	HT1.0
Dichloroacetate	103%		90-115			03/06/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/07/24	

General Chemistry

Method: EPA 300.0							
Bromide	1.2		0.020	mg/L	2	03/04/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Sample Results BSK Associates Laboratory Fresno (Continued)

Sample: AT-RES-2-522 Sampled: 02/13/24 12:30 by Windsor Lee
4B13138-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0219		Prepared: 03/06/24 03:02		Analyst: DXR		
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	270		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	96%		90-115			03/06/24	HT1.0
Dichloroacetate	96%		90-115			03/06/24	
Method: EPA 317.0	Batch ID: AHC0135		Prepared: 03/07/24 20:40		Analyst: DXR		
Bromate	ND		1.0	ug/L	1	03/07/24	
General Chemistry							
Method: EPA 300.0	Batch ID: AHC0060		Prepared: 03/01/24 16:00		Analyst: AAS		
Bromide	0.69		0.010	mg/L	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: AHC0135 - EPA 317.0									
Blank (AHC0135-BLK1)									
Bromate	ND	1.0	ug/L	Prepared & Analyzed: 03/07/24					
LCS (AHC0135-BS1)									
Bromate	9.8	1.0	ug/L	10.0	98	85-115			
LCS Dup (AHC0135-BSD1)									
Bromate	9.9	1.0	ug/L	10.0	99	85-115	1	10	
Matrix Spike (AHC0135-MS1)									
		Source: AHB3420-02		Prepared & Analyzed: 03/07/24					
Bromate	9.5	1.0	ug/L	10.0	ND	95	75-125		
Matrix Spike Dup (AHC0135-MSD1)									
		Source: AHB3420-02		Prepared & Analyzed: 03/07/24					
Bromate	9.7	1.0	ug/L	10.0	ND	97	75-125	2	10
Batch: AHC0219 - EPA 300.1									
Blank (AHC0219-BLK1)									
Chlorate	ND	5.0	ug/L	Prepared & Analyzed: 03/05/24					
Chlorite	ND	0.0050	mg/L						
<i>Surrogate(s)</i>									
Dichloroacetate	0.508		mg/L	0.500	102	90-115			
Dichloroacetate	508		ug/L	500	102	90-115			
LCS (AHC0219-BS1)									
Chlorate	200	5.0	ug/L	200	100	85-115			
Chlorite	0.21	0.0050	mg/L	0.200	105	85-115			
<i>Surrogate(s)</i>									
Dichloroacetate	0.512		mg/L	0.500	102	90-115			
Dichloroacetate	512		ug/L	500	102	90-115			
LCS Dup (AHC0219-BSD1)									
Chlorate	200	5.0	ug/L	200	100	85-115	0.1	10	
Chlorite	0.21	0.0050	mg/L	0.200	103	85-115	2	10	
<i>Surrogate(s)</i>									
Dichloroacetate	0.525		mg/L	0.500	105	90-115			
Dichloroacetate	525		ug/L	500	105	90-115			
Matrix Spike (AHC0219-MS1)									
		Source: AHB3420-01		Prepared & Analyzed: 03/05/24					
Chlorate	100	5.0	ug/L	100	ND	104	75-125		
Chlorite	0.10	0.0050	mg/L	0.100	ND	104	75-125		
<i>Surrogate(s)</i>									
Dichloroacetate	0.549		mg/L	0.500	110	90-115			
Dichloroacetate	549		ug/L	500	110	90-115			
Matrix Spike (AHC0219-MS2)									
		Source: AHC0050-01		Prepared & Analyzed: 03/06/24					
Chlorate	100	5.0	ug/L	100	ND	105	75-125		
Chlorite	0.097	0.0050	mg/L	0.100	ND	97	75-125		
<i>Surrogate(s)</i>									
Dichloroacetate	0.521		mg/L	0.500	104	90-115			
Dichloroacetate	521		ug/L	500	104	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0219 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0219-MSD1) Source: AHB3420-01 Prepared & Analyzed: 03/05/24										
Chlorate	99	5.0	ug/L	100	ND	99	75-125	5	10	
Chlorite	0.10	0.0050	mg/L	0.100	ND	105	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.555		mg/L	0.500		111	90-115			
Dichloroacetate	555		ug/L	500		111	90-115			
Matrix Spike Dup (AHC0219-MSD2) Source: AHC0050-01 Prepared & Analyzed: 03/06/24										
Chlorate	100	5.0	ug/L	100	ND	104	75-125	0.9	10	
Chlorite	0.096	0.0050	mg/L	0.100	ND	96	75-125	1	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.509		mg/L	0.500		102	90-115			
Dichloroacetate	509		ug/L	500		102	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0060 - EPA 300.0										
Blank (AHC0060-BLK1) Prepared & Analyzed: 03/01/24										
Bromide	ND	0.010	mg/L							
LCS (AHC0060-BS1) Prepared & Analyzed: 03/01/24										
Bromide	0.19	0.010	mg/L	0.200		96	90-110			
Matrix Spike (AHC0060-MS1) Source: AHB3708-01 Prepared & Analyzed: 03/01/24										
Bromide	0.096	0.010	mg/L	0.100	ND	96	80-120			
Matrix Spike (AHC0060-MS2) Source: AHC0055-03 Prepared & Analyzed: 03/01/24										
Bromide	0.40	0.010	mg/L	0.100	0.34	60	80-120			MS1.0
Matrix Spike Dup (AHC0060-MSD1) Source: AHB3708-01 Prepared & Analyzed: 03/01/24										
Bromide	0.097	0.010	mg/L	0.100	ND	97	80-120	1	10	
Matrix Spike Dup (AHC0060-MSD2) Source: AHC0055-03 Prepared & Analyzed: 03/01/24										
Bromide	0.41	0.010	mg/L	0.100	0.34	69	80-120	2	10	MS1.0
Batch: AHC0152 - EPA 300.0										
Blank (AHC0152-BLK1) Prepared & Analyzed: 03/04/24										
Bromide	ND	0.010	mg/L							
LCS (AHC0152-BS1) Prepared & Analyzed: 03/04/24										
Bromide	0.19	0.010	mg/L	0.200		95	90-110			
Matrix Spike (AHC0152-MS1) Source: AHC0045-05RE1 Prepared & Analyzed: 03/04/24										
Bromide	1.2	0.020	mg/L	0.200	1.1	44	80-120			MS1.0
Matrix Spike Dup (AHC0152-MSD1) Source: AHC0045-05RE1 Prepared & Analyzed: 03/04/24										
Bromide	1.2	0.020	mg/L	0.200	1.1	49	80-120	0.9	10	MS1.0

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1108 - EPA 300.0											
Blank (W4B1108-BLK1)					Prepared & Analyzed: 02/14/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1108-BS1)					Prepared & Analyzed: 02/14/24						
Chloride, Total	20.1	0.19	0.50	mg/l	20.0		100	90-110			
Fluoride, Total	1.92	0.0090	0.10	mg/l	2.00		96	90-110			
Sulfate as SO4	19.8	0.24	0.50	mg/l	20.0		99	90-110			
Matrix Spike (W4B1108-MS1)					Source: 4B13114-01 Prepared & Analyzed: 02/14/24						
Chloride, Total	264	1.9	5.0	mg/l	200	52.5	106	76-118			
Fluoride, Total	20.0	0.090	1.0	mg/l	20.0	0.266	99	90-107			
Sulfate as SO4	263	2.4	5.0	mg/l	200	54.0	105	84-111			
Matrix Spike (W4B1108-MS2)					Source: 4B13114-02 Prepared & Analyzed: 02/14/24						
Chloride, Total	275	1.9	5.0	mg/l	200	60.8	107	76-118			
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.265	100	90-107			
Sulfate as SO4	262	2.4	5.0	mg/l	200	50.4	106	84-111			
Matrix Spike Dup (W4B1108-MSD1)					Source: 4B13114-01 Prepared & Analyzed: 02/14/24						
Chloride, Total	265	1.9	5.0	mg/l	200	52.5	106	76-118	0.2	20	
Fluoride, Total	20.1	0.090	1.0	mg/l	20.0	0.266	99	90-107	0.5	10	
Sulfate as SO4	264	2.4	5.0	mg/l	200	54.0	105	84-111	0.3	20	
Matrix Spike Dup (W4B1108-MSD2)					Source: 4B13114-02 Prepared & Analyzed: 02/14/24						
Chloride, Total	275	1.9	5.0	mg/l	200	60.8	107	76-118	0.2	20	
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.265	100	90-107	0	10	
Sulfate as SO4	261	2.4	5.0	mg/l	200	50.4	105	84-111	0.2	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:50

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1091 - EPA 140.1										
Blank (W4B1091-BLK1) Prepared & Analyzed: 02/13/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1091-DUP1) Source: 4A29014-02 Prepared & Analyzed: 02/13/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Duplicate (W4B1091-DUP2) Source: 4A29014-12 Prepared & Analyzed: 02/13/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1092 - EPA 353.2										
Blank (W4B1092-BLK1) Prepared & Analyzed: 02/13/24										
Nitrate as N	ND	0.040	0.10	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B1092-BS1) Prepared & Analyzed: 02/13/24										
Nitrate as N	1.01	0.040	0.10	mg/l	1.00		101 90-110			
Nitrite as N	982	42	100	ug/l	1000		98 90-110			
Matrix Spike (W4B1092-MS1) Source: 3L15016-07 Prepared & Analyzed: 02/13/24										
Nitrate as N	5.61	0.040	0.10	mg/l	2.00	3.57	102 90-110			
Nitrite as N	1000	42	100	ug/l	1000	ND	100 90-110			
Matrix Spike Dup (W4B1092-MSD1) Source: 3L15016-07 Prepared & Analyzed: 02/13/24										
Nitrate as N	5.61	0.040	0.10	mg/l	2.00	3.57	102 90-110	0	10	
Nitrite as N	1010	42	100	ug/l	1000	ND	101 90-110	1	15	
Batch: W4B1101 - SM 4500H+-B										
LCS (W4B1101-BS1) Prepared & Analyzed: 02/14/24										
pH	6.95	0.10	0.10	pH Units	6.86		101 98.8-101			
Duplicate (W4B1101-DUP1) Source: 4B08003-01 Prepared & Analyzed: 02/14/24										
pH	8.52	0.10	0.10	pH Units		8.27		3	3.1	
Batch: W4B1107 - EPA 140.1										
Blank (W4B1107-BLK1) Prepared & Analyzed: 02/14/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1107-DUP1) Source: 4B13077-01 Prepared & Analyzed: 02/14/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Duplicate (W4B1107-DUP2) Source: 4B13077-02 Prepared & Analyzed: 02/14/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1196 - SM 2120B										
LCS (W4B1196-BS1) Prepared & Analyzed: 02/14/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1196-DUP1) Source: 4B13140-02 Prepared & Analyzed: 02/14/24										
Color	ND		3.0	Color Units		ND			10	
Duplicate (W4B1196-DUP2) Source: 4B13140-03 Prepared & Analyzed: 02/14/24										
Color	ND		3.0	Color Units		ND			10	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1233 - SM 2540C											
Blank (W4B1233-BLK1)											
Total Dissolved Solids	ND	4.0	10	mg/l	Prepared: 02/14/24 Analyzed: 02/15/24						
LCS (W4B1233-BS1)											
Total Dissolved Solids	801	4.0	10	mg/l	824		97	97-103			
Duplicate (W4B1233-DUP1)											
Total Dissolved Solids	1760	4.0	10	mg/l		1700			3	10	
Duplicate (W4B1233-DUP2)											
Total Dissolved Solids	1390	4.0	10	mg/l		1410			2	10	
Batch: W4B1268 - SM 2320B											
Blank (W4B1268-BLK1)											
Alkalinity as CaCO3	ND	7.2	20	mg/l	Prepared & Analyzed: 02/15/24						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l							
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l							
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l							
LCS (W4B1268-BS1)											
Alkalinity as CaCO3	86.3	7.2	20	mg/l	87.8		98	94-108			
Bicarbonate Alkalinity as HCO3	105	8.8	24	mg/l	107		98	95-108			
Duplicate (W4B1268-DUP1)											
Alkalinity as CaCO3	77.7	7.2	20	mg/l		77.6			0.1	15	
Bicarbonate Alkalinity as HCO3	94.8	8.8	24	mg/l		94.7			0.1	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Batch: W4B2385 - EPA 365.3											
Blank (W4B2385-BLK1)											
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l	Prepared: 02/28/24 Analyzed: 03/04/24						
LCS (W4B2385-BS1)											
Phosphorus as PO4, Total	0.596	0.021	0.030	mg/l	0.612		97	90-110			
Matrix Spike (W4B2385-MS1)											
Phosphorus as PO4, Total	0.711	0.021	0.030	mg/l	0.612	0.124	96	90-110			
Matrix Spike Dup (W4B2385-MSD1)											
Phosphorus as PO4, Total	0.730	0.021	0.030	mg/l	0.612	0.124	99	90-110	3	20	
Batch: W4C0062 - EPA 351.2											
Blank (W4C0062-BLK1)											
TKN	ND	0.065	0.10	mg/l	Prepared: 03/01/24 Analyzed: 03/05/24						
Blank (W4C0062-BLK2)											
TKN	ND	0.065	0.10	mg/l	Prepared: 03/01/24 Analyzed: 03/05/24						
LCS (W4C0062-BS1)											
TKN	0.939	0.065	0.10	mg/l	1.00		94	90-110			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0062 - EPA 351.2 (Continued)											
LCS (W4C0062-BS2)					Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	0.918	0.065	0.10	mg/l	1.00		92	90-110			
Matrix Spike (W4C0062-MS1)					Source: 4B14109-02 Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	3.04	0.13	0.20	mg/l	2.00	1.19	93	90-110			
Matrix Spike (W4C0062-MS2)					Source: 4B29072-01 Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	1.72	0.065	0.10	mg/l	1.00	0.750	97	90-110			
Matrix Spike Dup (W4C0062-MSD1)					Source: 4B14109-02 Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	3.09	0.13	0.20	mg/l	2.00	1.19	95	90-110	1	10	
Matrix Spike Dup (W4C0062-MSD2)					Source: 4B29072-01 Prepared: 03/01/24 Analyzed: 03/05/24						
TKN	1.71	0.065	0.10	mg/l	1.00	0.750	96	90-110	0.6	10	
Batch: W4C0091 - EPA 350.1											
Blank (W4C0091-BLK1)					Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W4C0091-BLK2)					Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W4C0091-BS1)					Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.243	0.017	0.10	mg/l	0.250		97	90-110			
LCS (W4C0091-BS2)					Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.246	0.017	0.10	mg/l	0.250		98	90-110			
Matrix Spike (W4C0091-MS1)					Source: 4B02010-12 Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.375	0.017	0.10	mg/l	0.250	0.141	94	90-110			
Matrix Spike (W4C0091-MS2)					Source: 4B13138-01 Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.650	0.017	0.10	mg/l	0.250	0.416	94	90-110			
Matrix Spike Dup (W4C0091-MSD1)					Source: 4B02010-12 Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.379	0.017	0.10	mg/l	0.250	0.141	95	90-110	1	15	
Matrix Spike Dup (W4C0091-MSD2)					Source: 4B13138-01 Prepared: 03/01/24 Analyzed: 03/07/24						
Ammonia as N	0.644	0.017	0.10	mg/l	0.250	0.416	91	90-110	0.8	15	
Batch: W4C0101 - EPA 365.3											
Blank (W4C0101-BLK1)					Prepared: 03/01/24 Analyzed: 03/07/24						
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W4C0101-BS1)					Prepared: 03/01/24 Analyzed: 03/07/24						
Phosphorus as PO4, Total	0.601	0.021	0.030	mg/l	0.612		98	90-110			
Matrix Spike (W4C0101-MS1)					Source: 4B13116-02 Prepared: 03/01/24 Analyzed: 03/07/24						
Phosphorus as PO4, Total	1.24	0.021	0.030	mg/l	0.612	0.662	95	90-110			
Matrix Spike Dup (W4C0101-MSD1)					Source: 4B13116-02 Prepared: 03/01/24 Analyzed: 03/07/24						
Phosphorus as PO4, Total	1.26	0.021	0.030	mg/l	0.612	0.662	97	90-110	1	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier	
Batch: W4B2096 - EPA 200.7										
Blank (W4B2096-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	ND	1.3	10	ug/l						
Calcium, Total	ND	0.0240	0.500	mg/l						
Magnesium, Total	ND	0.0148	0.500	mg/l						
Silica as SiO ₂ , Dissolved	ND	0.0086	0.10	mg/l						
Silica as SiO ₂ , Total	ND	0.0086	0.10	mg/l						
LCS (W4B2096-BS1)					Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	225	1.3	10	ug/l	200	112	85-115			
Calcium, Total	47.9	0.0240	0.500	mg/l	50.2	96	85-115			
Magnesium, Total	48.1	0.0148	0.500	mg/l	50.2	96	85-115			
Silica as SiO ₂ , Dissolved	43.7	0.0086	0.10	mg/l	43.2	101	85-115			
Silica as SiO ₂ , Total	43.7	0.0086	0.10	mg/l	43.2	101	85-115			
Matrix Spike (W4B2096-MS1)					Source: 4B12117-01 Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	366	1.3	10	ug/l	200	139	114	70-130		
Calcium, Total	155	0.0240	0.500	mg/l	50.2	110	89	70-130		
Magnesium, Total	98.7	0.0148	0.500	mg/l	50.2	51.7	94	70-130		
Silica as SiO ₂ , Dissolved	81.1	0.0086	0.10	mg/l	43.2	38.3	99	70-130		
Silica as SiO ₂ , Total	81.1	0.0086	0.10	mg/l	43.2	38.1	100	70-130		
Matrix Spike (W4B2096-MS2)					Source: 4B13138-01 Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	376	1.3	10	ug/l	200	138	119	70-130		
Calcium, Total	159	0.0240	0.500	mg/l	50.2	111	95	70-130		
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.3	98	70-130		
Silica as SiO ₂ , Dissolved	83.2	0.0086	0.10	mg/l	43.2	36.7	108	70-130		
Silica as SiO ₂ , Total	83.2	0.0086	0.10	mg/l	43.2	37.5	106	70-130		
Matrix Spike Dup (W4B2096-MSD1)					Source: 4B12117-01 Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	373	1.3	10	ug/l	200	139	117	70-130	2 30	
Calcium, Total	157	0.0240	0.500	mg/l	50.2	110	94	70-130	2 30	
Magnesium, Total	100	0.0148	0.500	mg/l	50.2	51.7	97	70-130	2 30	
Silica as SiO ₂ , Dissolved	83.3	0.0086	0.10	mg/l	43.2	38.3	104	70-130	3 30	
Silica as SiO ₂ , Total	83.3	0.0086	0.10	mg/l	43.2	38.1	105	70-130	3 30	
Matrix Spike Dup (W4B2096-MSD2)					Source: 4B13138-01 Prepared: 02/26/24 Analyzed: 02/28/24					
Boron, Total	375	1.3	10	ug/l	200	138	118	70-130	0.2 30	
Calcium, Total	159	0.0240	0.500	mg/l	50.2	111	95	70-130	0.1 30	
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.3	97	70-130	0.2 30	
Silica as SiO ₂ , Dissolved	83.2	0.0086	0.10	mg/l	43.2	36.7	108	70-130	0.06 30	
Silica as SiO ₂ , Total	83.2	0.0086	0.10	mg/l	43.2	37.5	106	70-130	0.06 30	
Batch: W4B2097 - EPA 200.8										
Blank (W4B2097-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24					
Aluminum, Total	ND	4.4	20	ug/l						



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Blank (W4B2097-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24						
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W4B2097-BS1)											
					Prepared: 02/26/24 Analyzed: 02/28/24						
Aluminum, Total	48.0	4.4	20	ug/l	50.0		96	85-115			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	48.5	0.14	1.0	ug/l	50.0		97	85-115			
Copper, Total	53.2	0.23	0.50	ug/l	50.0		106	85-115			
Iron, Dissolved	1210	3.9	20	ug/l	1050		115	85-115			
Iron, Total	1210	3.9	20	ug/l	1050		115	85-115			
Lead, Total	50.3	0.083	0.20	ug/l	50.0		101	85-115			
Manganese, Dissolved	52.3	0.11	1.0	ug/l	50.0		105	85-115			
Manganese, Total	52.3	0.23	1.0	ug/l	50.0		105	85-115			
Potassium, Total	2.11	0.068	0.50	mg/l	2.05		103	85-115			
Selenium, Total	50.5	0.067	0.40	ug/l	50.0		101	85-115			
Sodium, Total	2.18	0.10	1.0	mg/l	2.05		106	85-115			
Strontium, Total	48.2	0.036	0.20	ug/l	50.0		96	85-115			
Matrix Spike (W4B2097-MS1)											
					Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24						
Aluminum, Total	46.9	4.4	20	ug/l	50.0	ND	94	70-130			
Arsenic, Total	51.5	0.074	0.40	ug/l	50.0	0.653	102	70-130			
Barium, Total	103	0.14	1.0	ug/l	50.0	52.3	102	70-130			
Copper, Total	51.4	0.23	0.50	ug/l	50.0	1.93	99	70-130			
Iron, Dissolved	1130	3.9	20	ug/l	1050	ND	108	70-130			
Iron, Total	1130	3.9	20	ug/l	1050	4.77	107	70-130			
Lead, Total	50.7	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	50.3	0.11	1.0	ug/l	50.0	0.114	100	70-130			
Manganese, Total	50.3	0.23	1.0	ug/l	50.0	0.320	100	70-130			
Potassium, Total	5.10	0.068	0.50	mg/l	2.05	3.10	98	70-130			
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	1.24	97	70-130			
Sodium, Total	94.0	0.10	1.0	mg/l	2.05	93.0	48	70-130			

MS-02

4B13138

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Matrix Spike (W4B2097-MS1) Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24											
Strontium, Total	845	0.036	0.20	ug/l	50.0	808	74	70-130			
Matrix Spike (W4B2097-MS2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	47.9	4.4	20	ug/l	50.0	ND	96	70-130			
Arsenic, Total	50.1	0.074	0.40	ug/l	50.0	0.283	100	70-130			
Barium, Total	59.6	0.14	1.0	ug/l	50.0	10.2	99	70-130			
Copper, Total	50.8	0.23	0.50	ug/l	50.0	ND	101	70-130			
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130			
Iron, Total	1140	3.9	20	ug/l	1050	ND	109	70-130			
Lead, Total	49.6	0.083	0.20	ug/l	50.0	ND	99	70-130			
Manganese, Dissolved	50.6	0.11	1.0	ug/l	50.0	ND	101	70-130			
Manganese, Total	50.6	0.23	1.0	ug/l	50.0	ND	101	70-130			
Potassium, Total	2.76	0.068	0.50	mg/l	2.05	0.772	97	70-130			
Selenium, Total	48.4	0.067	0.40	ug/l	50.0	0.399	96	70-130			
Sodium, Total	33.3	0.10	1.0	mg/l	2.05	33.8	NR	70-130			MS-02
Strontium, Total	191	0.036	0.20	ug/l	50.0	147	89	70-130			
Matrix Spike Dup (W4B2097-MSD1) Source: 4B12117-02 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	47.9	4.4	20	ug/l	50.0	ND	96	70-130	2	30	
Arsenic, Total	51.6	0.074	0.40	ug/l	50.0	0.653	102	70-130	0.09	30	
Barium, Total	104	0.14	1.0	ug/l	50.0	52.3	103	70-130	0.6	30	
Copper, Total	51.6	0.23	0.50	ug/l	50.0	1.93	99	70-130	0.4	30	
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130	1	30	
Iron, Total	1140	3.9	20	ug/l	1050	4.77	109	70-130	1	30	
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101	70-130	0.3	30	
Manganese, Dissolved	50.0	0.11	1.0	ug/l	50.0	0.114	100	70-130	0.5	30	
Manganese, Total	50.0	0.23	1.0	ug/l	50.0	0.320	99	70-130	0.5	30	
Potassium, Total	5.12	0.068	0.50	mg/l	2.05	3.10	99	70-130	0.3	30	
Selenium, Total	50.3	0.067	0.40	ug/l	50.0	1.24	98	70-130	1	30	
Sodium, Total	94.6	0.10	1.0	mg/l	2.05	93.0	77	70-130	0.7	30	
Strontium, Total	860	0.036	0.20	ug/l	50.0	808	103	70-130	2	30	
Matrix Spike Dup (W4B2097-MSD2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Aluminum, Total	48.4	4.4	20	ug/l	50.0	ND	97	70-130	1	30	
Arsenic, Total	50.2	0.074	0.40	ug/l	50.0	0.283	100	70-130	0.3	30	
Barium, Total	59.8	0.14	1.0	ug/l	50.0	10.2	99	70-130	0.2	30	
Copper, Total	51.8	0.23	0.50	ug/l	50.0	ND	104	70-130	2	30	
Iron, Dissolved	1150	3.9	20	ug/l	1050	ND	109	70-130	0.4	30	
Iron, Total	1150	3.9	20	ug/l	1050	ND	109	70-130	0.4	30	
Lead, Total	50.0	0.083	0.20	ug/l	50.0	ND	100	70-130	0.9	30	
Manganese, Dissolved	51.7	0.11	1.0	ug/l	50.0	ND	103	70-130	2	30	
Manganese, Total	51.7	0.23	1.0	ug/l	50.0	ND	103	70-130	2	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2097 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B2097-MSD2) Source: 4B13138-03 Prepared: 02/26/24 Analyzed: 02/28/24											
Potassium, Total	2.82	0.068	0.50	mg/l	2.05	0.772	100	70-130	2	30	
Selenium, Total	48.7	0.067	0.40	ug/l	50.0	0.399	97	70-130	0.7	30	
Sodium, Total	34.9	0.10	1.0	mg/l	2.05	33.8	53	70-130	5	30	MS-02
Strontium, Total	193	0.036	0.20	ug/l	50.0	147	92	70-130	0.8	30	

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1155 - SM 9221B											
Blank (W4B1155-BLK1) Prepared: 02/13/24 Analyzed: 03/23/24											
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:50

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Calculation is based on source temperature @20C
HT1.0	Holding time exceeded. Sample was received at the lab past holding time.
J	Estimated conc. detected <MRL and >MDL.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B14141

Project: City of Santa Monica - Background Water Quality

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 3/07/2024

Received Date: 2/14/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

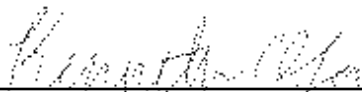
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/14/24 with the Chain-of-Custody document. The samples were received in good condition, at 4.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water
Quality
Project Manager: Brown & Caldwell

Certificate of Analysis

FINAL REPORT

Reported:
03/07/2024 12:17

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-3-54	Windsor Lee	4B14141-01	Water	02/14/24 00:00	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/07/2024 12:17

Sample Results

Sample: AT-GS-3-54

Sampled: 02/14/24 0:00 by Windsor Lee

4B14141-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0270	Preparation: _NONE (TOC/TOX)					
Total Organic Carbon (TOC)	0.69	0.30	mg/l	1	03/06/24	

Instr: TOC02

Prepared: 03/05/24 10:49

Analyst: rem

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
03/07/2024 12:17

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0270 - SM 5310B										
Blank (W4C0270-BLK1)										
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W4C0270-BS1)										
Total Organic Carbon (TOC)	1.13	0.30	mg/l	1.00		113	85-115			
Matrix Spike (W4C0270-MS1)										
			Source: 4A16001-01		Prepared: 03/05/24 Analyzed: 03/06/24					
Total Organic Carbon (TOC)	9.60	0.30	mg/l	5.00	5.08	90	76-115			
Matrix Spike Dup (W4C0270-MSD1)										
			Source: 4A16001-01		Prepared: 03/05/24 Analyzed: 03/06/24					
Total Organic Carbon (TOC)	9.78	0.30	mg/l	5.00	5.08	94	76-115	2	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water
Quality
Project Manager: Brown & Caldwell

Reported:
03/07/2024 12:17

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B14142

Project: City of Santa Monica - Background Water Quality

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 4/04/2024

Received Date: 2/14/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

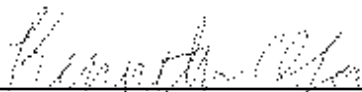
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/14/24 with the Chain-of-Custody document. The samples were received in good condition, at 4.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:52

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-3-54	Windsor Lee	4B14142-01	Water	02/14/24 09:40	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Sample Results

Sample: AT-GS-3-54

Sampled: 02/14/24 9:40 by Windsor Lee

4B14142-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1249	Preparation: _NONE (LC)		Prepared: 02/15/24 08:18		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/15/24	
Fluoride, Total	0.26	0.0090	0.10	mg/l	1	02/15/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1010	Preparation: _NONE (METALS)		Prepared: 03/13/24 11:18		Analyst: aln		
Aggressive Index	12.2			AGI	1	03/13/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1235	Preparation: _NONE (WETCHEM)		Prepared: 02/14/24 18:52		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/14/24 20:37	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0793	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:47		Analyst: YMT		
Ammonia as N	0.55	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0285	Preparation: _NONE (WETCHEM)		Prepared: 03/05/24 11:46		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/06/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1290	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 10:45		Analyst: ISM		
Nitrate as N	5.5	0.040	0.20	mg/l	1	02/15/24 13:23	
Nitrite as N	ND	42	100	ug/l	1	02/15/24 13:23	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.28	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1344	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 15:40		Analyst: kac		
Color	5.0		3.0	Color Units	1	02/15/24 17:09	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1268	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 09:45		Analyst: mes		
Alkalinity as CaCO ₃	320	7.2	20	mg/l	1	02/15/24	
Bicarbonate Alkalinity as HCO ₃	390	8.8	24	mg/l	1	02/15/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/15/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0581	Preparation: _NONE (METALS)		Prepared: 03/07/24 13:59		Analyst: kjo		
Langelier Index @ 20 C	0.238	-20.0	-10.0	LSI	1	03/07/24	
Langelier Index @ 60 C	0.748	-20.0	-10.0	LSI	1	03/07/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Sample Results

(Continued)

Sample: AT-GS-3-54

Sampled: 02/14/24 9:40 by Windsor Lee

4B14142-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0581	Preparation: _NONE (METALS)						Analyst: kjo
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	34.2	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1233	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	900	4.0	10	mg/l	1	02/15/24	
Method: SM 4500H+ -B							
Batch ID: W4B1265	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.19	0.10	0.10	pH Units	1	02/15/24 12:05	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	529	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7							
Batch ID: W4B1958	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	140	1.3	10	ug/l	1	02/26/24	
Calcium, Total	120	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	55.7	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	40	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8							
Batch ID: W4B1962	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.72	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	56	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	13	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	2.5	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	3.8	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	110	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	580	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Sample Results

(Continued)

Sample: AT-GS-3-54

Sampled: 02/14/24 9:40 by Windsor Lee

4B14142-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2336		Preparation: EPA 200.2		Prepared: 02/29/24 11:14		Analyst: tyc	
Iron, Total	24	3.9	20	ug/l	1	03/01/24	

Microbiological Parameters by Standard Methods

Method: SM 9215E				Instr: INC06			
Batch ID: W4B1310		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/14/24 17:05		Analyst: slh	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/16/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1312		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/14/24 17:28		Analyst: blg	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/16/24	

Sample Results

(Continued)

Sample: AT-GS-3-54

Sampled: 02/14/24 9:40 by Windsor Lee

4B14142-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1249		Preparation: _NONE (LC)		Prepared: 02/15/24 08:18		Analyst: CAM	
Sulfate as SO4	230	0.72	1.5	mg/l	3	02/16/24	

Sample Results BSK Associates Laboratory Fresno

Sample: AT-GS-3-54

Sampled: 02/14/24 9:40 by Windsor Lee

4B14142-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1		Batch ID: AHC0219		Prepared: 03/06/24 03:30		Analyst: DXR	
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	130		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	93%		90-115			03/06/24	HT1.0
Dichloroacetate	93%		90-115			03/06/24	
Method: EPA 317.0		Batch ID: AHC0136		Prepared: 03/08/24 15:05		Analyst: DXR	
Bromate	ND		1.0	ug/L	1	03/08/24	
General Chemistry							
Method: EPA 300.0		Batch ID: AHC0060		Prepared: 03/01/24 16:00		Analyst: AAS	
Bromide	0.64		0.010	mg/L	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: AHC0136 - EPA 317.0									
Blank (AHC0136-BLK1) Prepared & Analyzed: 03/08/24									
Bromate	ND	1.0	ug/L						
LCS (AHC0136-BS1) Prepared & Analyzed: 03/08/24									
Bromate	10	1.0	ug/L	10.0		103 85-115			
LCS Dup (AHC0136-BSD1) Prepared & Analyzed: 03/08/24									
Bromate	10	1.0	ug/L	10.0		103 85-115	0	10	
Matrix Spike (AHC0136-MS1) Source: AHC0050-02 Prepared & Analyzed: 03/08/24									
Bromate	9.2	1.0	ug/L	10.0	ND	92 75-125			
Matrix Spike Dup (AHC0136-MSD1) Source: AHC0050-02 Prepared & Analyzed: 03/08/24									
Bromate	9.1	1.0	ug/L	10.0	ND	91 75-125	1	10	
Batch: AHC0219 - EPA 300.1									
Blank (AHC0219-BLK1) Prepared & Analyzed: 03/05/24									
Chlorate	ND	5.0	ug/L						
Chlorite	ND	0.0050	mg/L						
<i>Surrogate(s)</i>									
Dichloroacetate	0.508		mg/L	0.500		102 90-115			
Dichloroacetate	508		ug/L	500		102 90-115			
LCS (AHC0219-BS1) Prepared & Analyzed: 03/05/24									
Chlorate	200	5.0	ug/L	200		100 85-115			
Chlorite	0.21	0.0050	mg/L	0.200		105 85-115			
<i>Surrogate(s)</i>									
Dichloroacetate	0.512		mg/L	0.500		102 90-115			
Dichloroacetate	512		ug/L	500		102 90-115			
LCS Dup (AHC0219-BSD1) Prepared & Analyzed: 03/05/24									
Chlorate	200	5.0	ug/L	200		100 85-115	0.1	10	
Chlorite	0.21	0.0050	mg/L	0.200		103 85-115	2	10	
<i>Surrogate(s)</i>									
Dichloroacetate	0.525		mg/L	0.500		105 90-115			
Dichloroacetate	525		ug/L	500		105 90-115			
Matrix Spike (AHC0219-MS1) Source: AHB3420-01 Prepared & Analyzed: 03/05/24									
Chlorate	100	5.0	ug/L	100	ND	104 75-125			
Chlorite	0.10	0.0050	mg/L	0.100	ND	104 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.549		mg/L	0.500		110 90-115			
Dichloroacetate	549		ug/L	500		110 90-115			
Matrix Spike (AHC0219-MS2) Source: AHC0050-01 Prepared & Analyzed: 03/06/24									
Chlorate	100	5.0	ug/L	100	ND	105 75-125			
Chlorite	0.097	0.0050	mg/L	0.100	ND	97 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.521		mg/L	0.500		104 90-115			
Dichloroacetate	521		ug/L	500		104 90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0219 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0219-MSD1) Source: AHB3420-01 Prepared & Analyzed: 03/05/24										
Chlorate	99	5.0	ug/L	100	ND	99	75-125	5	10	
Chlorite	0.10	0.0050	mg/L	0.100	ND	105	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.555		mg/L	0.500		111	90-115			
Dichloroacetate	555		ug/L	500		111	90-115			
Matrix Spike Dup (AHC0219-MSD2) Source: AHC0050-01 Prepared & Analyzed: 03/06/24										
Chlorate	100	5.0	ug/L	100	ND	104	75-125	0.9	10	
Chlorite	0.096	0.0050	mg/L	0.100	ND	96	75-125	1	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.509		mg/L	0.500		102	90-115			
Dichloroacetate	509		ug/L	500		102	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0060 - EPA 300.0										
Blank (AHC0060-BLK1) Prepared & Analyzed: 03/01/24										
Bromide	ND	0.010	mg/L							
LCS (AHC0060-BS1) Prepared & Analyzed: 03/01/24										
Bromide	0.19	0.010	mg/L	0.200		96	90-110			
Matrix Spike (AHC0060-MS1) Source: AHB3708-01 Prepared & Analyzed: 03/01/24										
Bromide	0.096	0.010	mg/L	0.100	ND	96	80-120			
Matrix Spike (AHC0060-MS2) Source: AHC0055-03 Prepared & Analyzed: 03/01/24										
Bromide	0.40	0.010	mg/L	0.100	0.34	60	80-120			MS1.0
Matrix Spike Dup (AHC0060-MSD1) Source: AHB3708-01 Prepared & Analyzed: 03/01/24										
Bromide	0.097	0.010	mg/L	0.100	ND	97	80-120	1	10	
Matrix Spike Dup (AHC0060-MSD2) Source: AHC0055-03 Prepared & Analyzed: 03/01/24										
Bromide	0.41	0.010	mg/L	0.100	0.34	69	80-120	2	10	MS1.0

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:52

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1249 - EPA 300.0											
Blank (W4B1249-BLK1)					Prepared & Analyzed: 02/15/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1249-BS1)					Prepared & Analyzed: 02/15/24						
Chloride, Total	20.5	0.19	0.50	mg/l	20.0		103	90-110			
Fluoride, Total	1.94	0.0090	0.10	mg/l	2.00		97	90-110			
Sulfate as SO4	20.1	0.24	0.50	mg/l	20.0		101	90-110			
Matrix Spike (W4B1249-MS1)					Source: 4A09011-01		Prepared: 02/15/24 Analyzed: 02/16/24				
Chloride, Total	276	1.9	5.0	mg/l	200	56.9	109	76-118			
Fluoride, Total	20.5	0.090	1.0	mg/l	20.0	0.173	102	86-107			
Sulfate as SO4	213	2.4	5.0	mg/l	200	ND	106	78-111			
Matrix Spike (W4B1249-MS2)					Source: 4A09011-05		Prepared: 02/15/24 Analyzed: 02/16/24				
Chloride, Total	249	1.9	5.0	mg/l	200	30.7	109	76-118			
Fluoride, Total	20.9	0.090	1.0	mg/l	20.0	0.174	103	86-107			
Sulfate as SO4	214	2.4	5.0	mg/l	200	ND	107	78-111			
Matrix Spike Dup (W4B1249-MSD1)					Source: 4A09011-01		Prepared: 02/15/24 Analyzed: 02/16/24				
Chloride, Total	275	1.9	5.0	mg/l	200	56.9	109	76-118	0.1	20	
Fluoride, Total	20.5	0.090	1.0	mg/l	20.0	0.173	102	86-107	0.2	20	
Sulfate as SO4	212	2.4	5.0	mg/l	200	ND	106	78-111	0.2	20	
Matrix Spike Dup (W4B1249-MSD2)					Source: 4A09011-05		Prepared: 02/15/24 Analyzed: 02/16/24				
Chloride, Total	244	1.9	5.0	mg/l	200	30.7	107	76-118	2	20	
Fluoride, Total	20.6	0.090	1.0	mg/l	20.0	0.174	102	86-107	1	20	
Sulfate as SO4	210	2.4	5.0	mg/l	200	ND	105	78-111	2	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:52

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B1233 - SM 2540C											
Blank (W4B1233-BLK1)											
Total Dissolved Solids	ND	4.0	10	mg/l	Prepared: 02/14/24 Analyzed: 02/15/24						
LCS (W4B1233-BS1)											
Total Dissolved Solids	801	4.0	10	mg/l	824		97	97-103			
Duplicate (W4B1233-DUP1)											
Total Dissolved Solids	1760	4.0	10	mg/l		1700			3	10	
Duplicate (W4B1233-DUP2)											
Total Dissolved Solids	1390	4.0	10	mg/l		1410			2	10	
Batch: W4B1235 - EPA 140.1											
Blank (W4B1235-BLK1)											
Threshold Odor Number	1.0		1.0	T.O.N.	Prepared & Analyzed: 02/14/24						J
Duplicate (W4B1235-DUP1)											
Threshold Odor Number	1.0		1.0	T.O.N.		1.0			0	20	J
Batch: W4B1265 - SM 4500H+-B											
LCS (W4B1265-BS1)											
pH	6.95	0.10	0.10	pH Units	6.86		101	98.8-101			
Duplicate (W4B1265-DUP1)											
pH	7.62	0.10	0.10	pH Units		7.50			2	3.1	
Batch: W4B1268 - SM 2320B											
Blank (W4B1268-BLK1)											
Alkalinity as CaCO3	ND	7.2	20	mg/l	Prepared & Analyzed: 02/15/24						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l							
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l							
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l							
LCS (W4B1268-BS1)											
Alkalinity as CaCO3	86.3	7.2	20	mg/l	87.8		98	94-108			
Bicarbonate Alkalinity as HCO3	105	8.8	24	mg/l	107		98	95-108			
Duplicate (W4B1268-DUP1)											
Alkalinity as CaCO3	77.7	7.2	20	mg/l		77.6			0.1	15	
Bicarbonate Alkalinity as HCO3	94.8	8.8	24	mg/l		94.7			0.1	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Batch: W4B1290 - EPA 353.2											
Blank (W4B1290-BLK1)											
Nitrate as N	ND	0.040	0.20	mg/l	Prepared & Analyzed: 02/15/24						
Nitrite as N	ND	42	100	ug/l							
Blank (W4B1290-BLK2)											
Nitrate as N	ND	0.040	0.20	mg/l	Prepared & Analyzed: 02/15/24						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1290 - EPA 353.2 (Continued)										
Blank (W4B1290-BLK2)					Prepared & Analyzed: 02/15/24					
Nitrite as N	ND	42	100	ug/l						
LCS (W4B1290-BS1)					Prepared & Analyzed: 02/15/24					
Nitrate as N	1.02	0.040	0.20	mg/l	1.00		102 90-110			
Nitrite as N	1010	42	100	ug/l	1000		101 90-110			
LCS (W4B1290-BS2)					Prepared & Analyzed: 02/15/24					
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101 90-110			
Nitrite as N	1000	42	100	ug/l	1000		100 90-110			
Matrix Spike (W4B1290-MS1)					Source: 4B14114-03		Prepared & Analyzed: 02/15/24			
Nitrate as N	4.20	0.040	0.20	mg/l	2.00	2.21	99 90-110			
Nitrite as N	1010	42	100	ug/l	1000	ND	101 90-110			
Matrix Spike (W4B1290-MS2)					Source: 4B14115-01		Prepared & Analyzed: 02/15/24			
Nitrate as N	3.56	0.040	0.20	mg/l	2.00	1.46	105 90-110			
Nitrite as N	1000	42	100	ug/l	1000	ND	100 90-110			
Matrix Spike Dup (W4B1290-MSD1)					Source: 4B14114-03		Prepared & Analyzed: 02/15/24			
Nitrate as N	4.21	0.040	0.20	mg/l	2.00	2.21	100 90-110	0.2	20	
Nitrite as N	1010	42	100	ug/l	1000	ND	101 90-110	0	20	
Matrix Spike Dup (W4B1290-MSD2)					Source: 4B14115-01		Prepared & Analyzed: 02/15/24			
Nitrate as N	3.53	0.040	0.20	mg/l	2.00	1.46	104 90-110	0.8	20	
Nitrite as N	1000	42	100	ug/l	1000	ND	100 90-110	0	20	
Batch: W4B1344 - SM 2120B										
LCS (W4B1344-BS1)					Prepared & Analyzed: 02/15/24					
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1344-DUP1)					Source: 4B14142-01		Prepared & Analyzed: 02/15/24			
Color	5.00		3.0	Color Units		5.00		0	10	
Duplicate (W4B1344-DUP2)					Source: 4B14144-01		Prepared & Analyzed: 02/15/24			
Color	ND		3.0	Color Units		ND			10	
Batch: W4C0285 - EPA 351.2										
Blank (W4C0285-BLK1)					Prepared: 03/05/24 Analyzed: 03/06/24					
TKN	ND	0.065	0.10	mg/l						
Blank (W4C0285-BLK2)					Prepared: 03/05/24 Analyzed: 03/06/24					
TKN	ND	0.065	0.10	mg/l						
LCS (W4C0285-BS1)					Prepared: 03/05/24 Analyzed: 03/06/24					
TKN	0.962	0.065	0.10	mg/l	1.00		96 90-110			
LCS (W4C0285-BS2)					Prepared: 03/05/24 Analyzed: 03/06/24					
TKN	0.942	0.065	0.10	mg/l	1.00		94 90-110			
Matrix Spike (W4C0285-MS1)					Source: 4B21101-28		Prepared: 03/05/24 Analyzed: 03/06/24			
TKN	1.17	0.065	0.10	mg/l	1.00	0.199	98 90-110			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0285 - EPA 351.2 (Continued)											
Matrix Spike (W4C0285-MS2)	Source: 4B21101-29		Prepared: 03/05/24		Analyzed: 03/06/24						
TKN	1.01	0.065	0.10	mg/l	1.00	ND	101	90-110			
Matrix Spike Dup (W4C0285-MSD1)	Source: 4B21101-28		Prepared: 03/05/24		Analyzed: 03/06/24						
TKN	1.32	0.065	0.10	mg/l	1.00	0.199	112	90-110	11	10	MS-01, R-02
Matrix Spike Dup (W4C0285-MSD2)	Source: 4B21101-29		Prepared: 03/05/24		Analyzed: 03/06/24						
TKN	0.985	0.065	0.10	mg/l	1.00	ND	98	90-110	3	10	
Batch: W4C0522 - EPA 365.3											
Blank (W4C0522-BLK1)	Source: 4B15058-07		Prepared: 03/07/24		Analyzed: 03/11/24						
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W4C0522-BS1)	Source: 4B15058-07		Prepared: 03/07/24		Analyzed: 03/11/24						
Phosphorus as PO4, Total	0.592	0.021	0.030	mg/l	0.612		97	90-110			
Matrix Spike (W4C0522-MS1)	Source: 4B15058-07		Prepared: 03/07/24		Analyzed: 03/11/24						
Phosphorus as PO4, Total	0.611	0.021	0.030	mg/l	0.612	ND	100	90-110			
Matrix Spike Dup (W4C0522-MSD1)	Source: 4B15058-07		Prepared: 03/07/24		Analyzed: 03/11/24						
Phosphorus as PO4, Total	0.501	0.021	0.030	mg/l	0.612	ND	82	90-110	20	20	MS-01
Batch: W4C0793 - EPA 350.1											
Blank (W4C0793-BLK1)	Source: 4B15122-03		Prepared: 03/11/24		Analyzed: 03/12/24						
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W4C0793-BLK2)	Source: 4B15122-03		Prepared: 03/11/24		Analyzed: 03/12/24						
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W4C0793-BS1)	Source: 4B15122-03		Prepared: 03/11/24		Analyzed: 03/12/24						
Ammonia as N	0.252	0.017	0.10	mg/l	0.250		101	90-110			
LCS (W4C0793-BS2)	Source: 4B15122-03		Prepared: 03/11/24		Analyzed: 03/12/24						
Ammonia as N	0.253	0.017	0.10	mg/l	0.250		101	90-110			
Matrix Spike (W4C0793-MS1)	Source: 4B14142-01		Prepared: 03/11/24		Analyzed: 03/12/24						
Ammonia as N	0.793	0.017	0.10	mg/l	0.250	0.548	98	90-110			
Matrix Spike (W4C0793-MS2)	Source: 4B15122-03		Prepared: 03/11/24		Analyzed: 03/12/24						
Ammonia as N	0.261	0.017	0.10	mg/l	0.250	ND	105	90-110			
Matrix Spike Dup (W4C0793-MSD1)	Source: 4B14142-01		Prepared: 03/11/24		Analyzed: 03/12/24						
Ammonia as N	0.797	0.017	0.10	mg/l	0.250	0.548	99	90-110	0.5	15	
Matrix Spike Dup (W4C0793-MSD2)	Source: 4B15122-03		Prepared: 03/11/24		Analyzed: 03/12/24						
Ammonia as N	0.261	0.017	0.10	mg/l	0.250	ND	104	90-110	0.06	15	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1958 - EPA 200.7									
Blank (W4B1958-BLK1)					Prepared: 02/23/24 Analyzed: 02/26/24				
Boron, Total	ND	1.3	10	ug/l					
Calcium, Total	ND	0.0240	0.500	mg/l					
Magnesium, Total	ND	0.0148	0.500	mg/l					
Silica as SiO ₂ , Dissolved	0.0169	0.0086	0.10	mg/l					J
Silica as SiO ₂ , Total	0.0185	0.0086	0.10	mg/l					J
LCS (W4B1958-BS1)					Prepared: 02/23/24 Analyzed: 02/26/24				
Boron, Total	226	1.3	10	ug/l	200		113 85-115		
Calcium, Total	50.9	0.0240	0.500	mg/l	50.2		101 85-115		
Magnesium, Total	50.7	0.0148	0.500	mg/l	50.2		101 85-115		
Silica as SiO ₂ , Dissolved	46.6	0.0086	0.10	mg/l	43.2		108 85-115		
Silica as SiO ₂ , Total	46.6	0.0086	0.10	mg/l	43.2		108 85-115		
Matrix Spike (W4B1958-MS1)					Source: 4B14107-01 Prepared: 02/23/24 Analyzed: 02/26/24				
Boron, Total	777	1.3	10	ug/l	200	545	116 70-130		
Calcium, Total	117	0.0240	0.500	mg/l	50.2	69.4	96 70-130		
Magnesium, Total	65.8	0.0148	0.500	mg/l	50.2	15.6	100 70-130		
Silica as SiO ₂ , Dissolved	70.2	0.0086	0.10	mg/l	43.2	24.2	107 70-130		
Silica as SiO ₂ , Total	70.2	0.0086	0.10	mg/l	43.2	24.0	107 70-130		
Matrix Spike (W4B1958-MS2)					Source: 4B14142-01 Prepared: 02/23/24 Analyzed: 02/26/24				
Boron, Total	371	1.3	10	ug/l	200	140	116 70-130		
Calcium, Total	168	0.0240	0.500	mg/l	50.2	120	96 70-130		
Magnesium, Total	106	0.0148	0.500	mg/l	50.2	55.7	100 70-130		
Silica as SiO ₂ , Dissolved	86.5	0.0086	0.10	mg/l	43.2	39.8	108 70-130		
Silica as SiO ₂ , Total	86.5	0.0086	0.10	mg/l	43.2	40.1	107 70-130		
Matrix Spike Dup (W4B1958-MSD1)					Source: 4B14107-01 Prepared: 02/23/24 Analyzed: 02/26/24				
Boron, Total	783	1.3	10	ug/l	200	545	119 70-130	0.7	30
Calcium, Total	119	0.0240	0.500	mg/l	50.2	69.4	99 70-130	1	30
Magnesium, Total	66.7	0.0148	0.500	mg/l	50.2	15.6	102 70-130	1	30
Silica as SiO ₂ , Dissolved	70.9	0.0086	0.10	mg/l	43.2	24.2	108 70-130	0.9	30
Silica as SiO ₂ , Total	70.9	0.0086	0.10	mg/l	43.2	24.0	108 70-130	0.9	30
Matrix Spike Dup (W4B1958-MSD2)					Source: 4B14142-01 Prepared: 02/23/24 Analyzed: 02/26/24				
Boron, Total	371	1.3	10	ug/l	200	140	116 70-130	0.06	30
Calcium, Total	168	0.0240	0.500	mg/l	50.2	120	96 70-130	0.04	30
Magnesium, Total	106	0.0148	0.500	mg/l	50.2	55.7	100 70-130	0.1	30
Silica as SiO ₂ , Dissolved	86.9	0.0086	0.10	mg/l	43.2	39.8	109 70-130	0.4	30
Silica as SiO ₂ , Total	86.9	0.0086	0.10	mg/l	43.2	40.1	108 70-130	0.4	30
Batch: W4B1962 - EPA 200.8									
Blank (W4B1962-BLK1)					Prepared: 02/23/24 Analyzed: 02/26/24				
Aluminum, Total	ND	4.4	20	ug/l					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:52

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
---------	--------	-----	-----	-------	-------------	---------------	------	-------	-----	-----------	-----------

Batch: W4B1962 - EPA 200.8 (Continued)

Blank (W4B1962-BLK1)

Prepared: 02/23/24 Analyzed: 02/26/24

Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							

LCS (W4B1962-BS1)

Prepared: 02/23/24 Analyzed: 02/26/24

Aluminum, Total	45.1	4.4	20	ug/l	50.0		90	85-115			
Arsenic, Total	50.7	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	50.3	0.14	1.0	ug/l	50.0		101	85-115			
Copper, Total	51.8	0.23	0.50	ug/l	50.0		103	85-115			
Iron, Dissolved	1130	3.9	20	ug/l	1050		108	85-115			
Lead, Total	50.2	0.083	0.20	ug/l	50.0		100	85-115			
Manganese, Dissolved	49.8	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	49.8	0.23	1.0	ug/l	50.0		100	85-115			
Potassium, Total	1.99	0.068	0.50	mg/l	2.05		97	85-115			
Selenium, Total	50.1	0.067	0.40	ug/l	50.0		100	85-115			
Sodium, Total	2.09	0.10	1.0	mg/l	2.05		102	85-115			
Strontium, Total	47.0	0.036	0.20	ug/l	50.0		94	85-115			

Matrix Spike (W4B1962-MS1)

Source: 4B14107-04

Prepared: 02/23/24 Analyzed: 02/26/24

Aluminum, Total	46.5	4.4	20	ug/l	50.0	ND	93	70-130			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0	ND	101	70-130			
Barium, Total	50.2	0.14	1.0	ug/l	50.0	ND	100	70-130			
Copper, Total	52.0	0.23	0.50	ug/l	50.0	ND	104	70-130			
Iron, Dissolved	1190	3.9	20	ug/l	1050	ND	113	70-130			
Lead, Total	50.2	0.083	0.20	ug/l	50.0	ND	100	70-130			
Manganese, Dissolved	50.2	0.11	1.0	ug/l	50.0	ND	100	70-130			
Manganese, Total	50.2	0.23	1.0	ug/l	50.0	ND	100	70-130			
Potassium, Total	2.02	0.068	0.50	mg/l	2.05	ND	99	70-130			
Selenium, Total	49.6	0.067	0.40	ug/l	50.0	ND	99	70-130			
Sodium, Total	2.10	0.10	1.0	mg/l	2.05	ND	102	70-130			
Strontium, Total	47.4	0.036	0.20	ug/l	50.0	ND	95	70-130			

Matrix Spike (W4B1962-MS2)

Source: 4B16032-01

Prepared: 02/23/24 Analyzed: 02/26/24

Aluminum, Total	46.6	4.4	20	ug/l	50.0	ND	93	70-130			
-----------------	------	-----	----	------	------	----	----	--------	--	--	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:52

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1962 - EPA 200.8 (Continued)											
Matrix Spike (W4B1962-MS2)			Source: 4B16032-01			Prepared: 02/23/24			Analyzed: 02/26/24		
Arsenic, Total	52.5	0.074	0.40	ug/l	50.0	0.687	104	70-130			
Barium, Total	108	0.14	1.0	ug/l	50.0	56.4	103	70-130			
Copper, Total	49.4	0.23	0.50	ug/l	50.0	ND	99	70-130			
Iron, Dissolved	1150	3.9	20	ug/l	1050	ND	110	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	62.0	0.11	1.0	ug/l	50.0	12.0	100	70-130			
Manganese, Total	62.0	0.23	1.0	ug/l	50.0	14.5	95	70-130			
Potassium, Total	4.38	0.068	0.50	mg/l	2.05	2.55	89	70-130			
Selenium, Total	53.3	0.067	0.40	ug/l	50.0	3.90	99	70-130			
Sodium, Total	104	0.10	1.0	mg/l	2.05	108	NR	70-130			MS-02
Strontium, Total	645	0.036	0.20	ug/l	50.0	571	147	70-130			MS-02
Matrix Spike Dup (W4B1962-MSD1)											
Source: 4B14107-04			Prepared: 02/23/24			Analyzed: 02/26/24					
Aluminum, Total	48.0	4.4	20	ug/l	50.0	ND	96	70-130	3	30	
Arsenic, Total	50.9	0.074	0.40	ug/l	50.0	ND	102	70-130	0.6	30	
Barium, Total	50.3	0.14	1.0	ug/l	50.0	ND	100	70-130	0.1	30	
Copper, Total	52.8	0.23	0.50	ug/l	50.0	ND	106	70-130	2	30	
Iron, Dissolved	1170	3.9	20	ug/l	1050	ND	112	70-130	1	30	
Lead, Total	49.7	0.083	0.20	ug/l	50.0	ND	99	70-130	0.8	30	
Manganese, Dissolved	50.3	0.11	1.0	ug/l	50.0	ND	100	70-130	0.1	30	
Manganese, Total	50.3	0.23	1.0	ug/l	50.0	ND	100	70-130	0.1	30	
Potassium, Total	2.05	0.068	0.50	mg/l	2.05	ND	100	70-130	1	30	
Selenium, Total	50.3	0.067	0.40	ug/l	50.0	ND	101	70-130	1	30	
Sodium, Total	2.12	0.10	1.0	mg/l	2.05	ND	103	70-130	1	30	
Strontium, Total	47.7	0.036	0.20	ug/l	50.0	ND	95	70-130	0.6	30	
Matrix Spike Dup (W4B1962-MSD2)											
Source: 4B16032-01			Prepared: 02/23/24			Analyzed: 02/26/24					
Aluminum, Total	47.6	4.4	20	ug/l	50.0	ND	95	70-130	2	30	
Arsenic, Total	52.0	0.074	0.40	ug/l	50.0	0.687	103	70-130	0.9	30	
Barium, Total	107	0.14	1.0	ug/l	50.0	56.4	102	70-130	0.6	30	
Copper, Total	50.3	0.23	0.50	ug/l	50.0	ND	100	70-130	2	30	
Iron, Dissolved	1180	3.9	20	ug/l	1050	ND	113	70-130	3	30	
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101	70-130	0.2	30	
Manganese, Dissolved	63.9	0.11	1.0	ug/l	50.0	12.0	104	70-130	3	30	
Manganese, Total	63.9	0.23	1.0	ug/l	50.0	14.5	99	70-130	3	30	
Potassium, Total	4.47	0.068	0.50	mg/l	2.05	2.55	94	70-130	2	30	
Selenium, Total	53.3	0.067	0.40	ug/l	50.0	3.90	99	70-130	0.04	30	
Sodium, Total	107	0.10	1.0	mg/l	2.05	108	NR	70-130	2	30	MS-02
Strontium, Total	636	0.036	0.20	ug/l	50.0	571	128	70-130	1	30	

Batch: W4B2336 - EPA 200.8

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:52

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2336 - EPA 200.8 (Continued)											
Blank (W4B2336-BLK1)											
Iron, Total	ND	3.9	20	ug/l							
LCS (W4B2336-BS1)											
Iron, Total	1150	3.9	20	ug/l	1050	110	110	85-115			
Matrix Spike (W4B2336-MS1)											
Iron, Total	1230	3.9	20	ug/l	1050	117	106	70-130			
Matrix Spike (W4B2336-MS2)											
Iron, Total	16900	7.9	40	ug/l	1050	13900	290	70-130			MS-02
Matrix Spike Dup (W4B2336-MSD1)											
Iron, Total	1240	3.9	20	ug/l	1050	117	107	70-130	0.4	30	
Matrix Spike Dup (W4B2336-MSD2)											
Iron, Total	15900	7.9	40	ug/l	1050	13900	187	70-130	7	30	MS-02

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1312 - SM 9221B											
Blank (W4B1312-BLK1)											
Total Coliform	ND	1.8	1.8	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:52

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Calculation is based on source temperature @20C
HT1.0	Holding time exceeded. Sample was received at the lab past holding time.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
R-02	The RPD was outside of QC acceptance limits due to possible matrix interference.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B14143

Project: COSM 97-005 - COPCs

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 3/08/2024

Received Date: 2/14/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/14/24 with the Chain-of-Custody document. The samples were received in good condition, at 4.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-3-54	Windsor Lee	4B14143-01	Water	02/14/24 09:20	
AT-GS-3-58	Windsor Lee	4B14143-02	Water	02/14/24 09:05	
AT-UV-3-510	Windsor Lee	4B14143-03	Water	02/14/24 10:30	
AT-GAC-3-511	Windsor Lee	4B14143-04	Water	02/14/24 08:40	
AT-GAC-3-511D	Windsor Lee	4B14143-05	Water	02/14/24 08:45	
AT-GAC-3-5233	Windsor Lee	4B14143-06	Water	02/14/24 09:55	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗		
Bromomethane	74-83-9	⊗		
Chloroethane	75-00-3	⊗		
Di-isopropyl ether	108-20-3	⊗		
2-Butanone	78-93-3	⊗		
2,2-Dichloropropane	594-20-7	⊗		
Bromochloromethane	74-97-5	⊗		
1,1-Dichloropropene	563-58-6	⊗		
Dibromomethane	74-95-3	⊗		
1,3-Dichloropropane	142-28-9	⊗		
2-Hexanone	591-78-6	⊗		
Bromobenzene	108-86-1	⊗		
1,2,3-Trichloropropane	96-18-4	⊗		
p-Isopropyltoluene	99-87-6	⊗		
Hexachlorobutadiene	87-68-3	⊗		
1,3-Dichloropropene, Total	542-75-6	⊗		
Acetone	67-64-1	⊗		
Acrylonitrile	107-13-1	⊗		
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		
SRL 524M-TCP in Water				
1,2,3-Trichloropropane	96-18-4		⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-3-54

Sampled: 02/14/24 9:20 by Windsor Lee

4B14143-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1646		Preparation: EPA 5030B		Prepared: 02/21/24 09:27		Analyst: ADM	
1,2,3-Trichloropropane	0.042	0.0012	0.0050	ug/l	1	02/22/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582		Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA	
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	02/24/24	
ADONA	ND	0.48	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.76	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/24/24	
PFBS	1.6	0.50	1.7	ng/l	1	02/24/24	J
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.57	1.7	ng/l	1	02/24/24	
PFHpA	0.63	0.46	1.7	ng/l	1	02/24/24	J
PFHxA	2.2	0.42	1.7	ng/l	1	02/24/24	
PFHxS	1.4	0.52	1.7	ng/l	1	02/24/24	J
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	0.64	0.58	1.7	ng/l	1	02/24/24	J
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	

Surrogate(s)

13C2-PFDA	116%	Conc: 40.4	70-130	02/24/24
13C2-PFHxA	110%	Conc: 38.1	70-130	02/24/24
d5-EtFOSAA	107%	Conc: 149	70-130	02/24/24
HFPO-DA-13C3	102%	Conc: 35.6	70-130	02/24/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/28/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/28/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/28/24	
1,1-Dichloroethane	0.74	0.27	0.50	ug/l	1	02/28/24	

4B14143

Page 3 of 37

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-54

Sampled: 02/14/24 9:20 by Windsor Lee

4B14143-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
1,1-Dichloroethene	4.4	0.16	0.50	ug/l	1	02/28/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/28/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/28/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/28/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/28/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/28/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/28/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/28/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/28/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/28/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/28/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/28/24	
Acetone	ND	3.1	5.0	ug/l	1	02/28/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/28/24	
Benzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/28/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/28/24	
Bromoform	1.8	0.38	0.50	ug/l	1	02/28/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/28/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/28/24	
Carbon tetrachloride	0.84	0.27	0.50	ug/l	1	02/28/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/28/24	
Chloroform	4.5	0.27	0.50	ug/l	1	02/28/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/28/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	02/28/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/28/24	
Dibromochloromethane	0.29	0.20	0.50	ug/l	1	02/28/24	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-54

Sampled: 02/14/24 9:20 by Windsor Lee

4B14143-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/28/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/28/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/28/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/28/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/28/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/28/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/28/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/28/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/28/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/28/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/28/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/28/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/28/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/28/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/28/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/28/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/28/24	
Styrene	ND	0.19	0.50	ug/l	1	02/28/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/28/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
Tetrachloroethene	1.3	0.18	0.50	ug/l	1	02/28/24	
THMs, Total	6.3		0.50	ug/l	1	02/28/24	
Toluene	ND	0.29	0.50	ug/l	1	02/28/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/28/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/28/24	
Trichloroethene	47	0.18	0.50	ug/l	1	02/28/24	
Trichlorofluoromethane	0.28	0.18	0.50	ug/l	1	02/28/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/28/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/28/24	

Surrogate(s)

1,2-Dichlorobenzene-d4 93% Conc: 46.6 70-130 02/28/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-54 Sampled: 02/14/24 9:20 by Windsor Lee

4B14143-01 (Water) (Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2 **Instr:** GCMS14
Batch ID: W4B2189 **Preparation:** EPA 5030B **Prepared:** 02/27/24 12:08 **Analyst:** ADM
 4-Bromofluorobenzene 95% *Conc:* 47.6 *70-130* 02/28/24

Sample Results

(Continued)

Sample: AT-GS-3-54 Sampled: 02/14/24 9:20 by Windsor Lee

4B14143-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522 **Instr:** GCMS20
Batch ID: W4B1491 **Preparation:** EPA 522/SPE **Prepared:** 02/20/24 07:48 **Analyst:** mld
 1,4-Dioxane **49** 0.56 1.4 ug/l 20 02/26/24 M-06
Surrogate(s)
 1,4-Dioxane-d8 91% *Conc:* 9.02 *70-130* 02/26/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-58

Sampled: 02/14/24 9:05 by Windsor Lee

4B14143-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1646		Preparation: EPA 5030B		Prepared: 02/21/24 09:27		Analyst: ADM	
1,2,3-Trichloropropane	0.048	0.0012	0.0050	ug/l	1	02/22/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582		Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA	
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	02/24/24	
ADONA	ND	0.55	2.0	ng/l	1	02/24/24	
EtFOSAA	ND	0.48	2.0	ng/l	1	02/24/24	
HFPO-DA	ND	0.87	2.0	ng/l	1	02/24/24	
MeFOSAA	ND	0.58	2.0	ng/l	1	02/24/24	
PFBS	1.6	0.58	2.0	ng/l	1	02/24/24	J
PFDA	ND	0.45	2.0	ng/l	1	02/24/24	
PFDoA	ND	0.66	2.0	ng/l	1	02/24/24	
PFHpA	0.59	0.53	2.0	ng/l	1	02/24/24	J
PFHxA	2.1	0.49	2.0	ng/l	1	02/24/24	
PFHxS	1.4	0.59	2.0	ng/l	1	02/24/24	J
PFNA	ND	0.52	2.0	ng/l	1	02/24/24	
PFOA	0.68	0.67	2.0	ng/l	1	02/24/24	J
PFOS	ND	0.53	2.0	ng/l	1	02/24/24	
PFTeDA	ND	0.45	2.0	ng/l	1	02/24/24	
PFTTrDA	ND	0.42	2.0	ng/l	1	02/24/24	
PFUnA	ND	0.48	2.0	ng/l	1	02/24/24	

Surrogate(s)

13C2-PFDA	114%	Conc: 41.7	70-130	02/24/24
13C2-PFHxA	112%	Conc: 40.7	70-130	02/24/24
d5-EtFOSAA	107%	Conc: 156	70-130	02/24/24
HFPO-DA-13C3	105%	Conc: 38.2	70-130	02/24/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/28/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/28/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/28/24	
1,1-Dichloroethane	0.74	0.27	0.50	ug/l	1	02/28/24	

4B14143

Page 7 of 37

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-58

Sampled: 02/14/24 9:05 by Windsor Lee

4B14143-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B			Prepared: 02/27/24 12:08		Analyst: ADM
1,1-Dichloroethene	3.8	0.16	0.50	ug/l	1	02/28/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/28/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/28/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/28/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/28/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/28/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/28/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/28/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/28/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/28/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/28/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/28/24	
Acetone	ND	3.1	5.0	ug/l	1	02/28/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/28/24	
Benzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/28/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/28/24	
Bromoform	2.4	0.38	0.50	ug/l	1	02/28/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/28/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/28/24	
Carbon tetrachloride	0.79	0.27	0.50	ug/l	1	02/28/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/28/24	
Chloroform	4.8	0.27	0.50	ug/l	1	02/28/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/28/24	
cis-1,2-Dichloroethene	1.8	0.25	0.50	ug/l	1	02/28/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/28/24	
Dibromochloromethane	0.75	0.20	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-58

Sampled: 02/14/24 9:05 by Windsor Lee

4B14143-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B			Prepared: 02/27/24 12:08		Analyst: ADM
Dibromomethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/28/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/28/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/28/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/28/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/28/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/28/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/28/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/28/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/28/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/28/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/28/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/28/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/28/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/28/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/28/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/28/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/28/24	
Styrene	ND	0.19	0.50	ug/l	1	02/28/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/28/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
Tetrachloroethene	1.1	0.18	0.50	ug/l	1	02/28/24	
THMs, Total	8.0		0.50	ug/l	1	02/28/24	
Toluene	ND	0.29	0.50	ug/l	1	02/28/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/28/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/28/24	
Trichloroethene	50	0.18	0.50	ug/l	1	02/28/24	
Trichlorofluoromethane	0.24	0.18	0.50	ug/l	1	02/28/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/28/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/28/24	

Surrogate(s)

1,2-Dichlorobenzene-d4 76% Conc: 37.9 70-130 02/28/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-58 Sampled: 02/14/24 9:05 by Windsor Lee

4B14143-02 (Water) (Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
4-Bromofluorobenzene	78%	Conc: 38.9	70-130			02/28/24	

Sample Results

(Continued)

Sample: AT-GS-3-58 Sampled: 02/14/24 9:05 by Windsor Lee

4B14143-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1491		Preparation: EPA 522/SPE		Prepared: 02/20/24 07:48		Analyst: mld	
1,4-Dioxane	48	0.56	1.4	ug/l	20	02/26/24	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 9.00	70-130			02/26/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-3-510

Sampled: 02/14/24 10:30 by Windsor Lee

4B14143-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1491	Preparation: EPA 522/SPE		Prepared: 02/20/24 07:48		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/23/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	97%	Conc: 9.52	70-130			02/23/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1646	Preparation: EPA 5030B		Prepared: 02/21/24 09:27		Analyst: ADM		
1,2,3-Trichloropropane	0.016	0.0012	0.0050	ug/l	1	02/22/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.50	1.8	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.48	1.8	ng/l	1	02/24/24	
ADONA	ND	0.50	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.78	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.52	1.8	ng/l	1	02/24/24	
PFBS	1.6	0.52	1.8	ng/l	1	02/24/24	J
PFDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.59	1.8	ng/l	1	02/24/24	
PFHpA	0.64	0.48	1.8	ng/l	1	02/24/24	J
PFHxA	2.2	0.44	1.8	ng/l	1	02/24/24	
PFHxS	1.3	0.53	1.8	ng/l	1	02/24/24	J
PFNA	ND	0.47	1.8	ng/l	1	02/24/24	
PFOA	0.66	0.60	1.8	ng/l	1	02/24/24	J
PFOS	ND	0.48	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.41	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.38	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.43	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	119%	Conc: 42.8	70-130			02/24/24	
13C2-PFHxA	111%	Conc: 40.1	70-130			02/24/24	
d5-EtFOSAA	114%	Conc: 164	70-130			02/24/24	
HFPO-DA-13C3	104%	Conc: 37.2	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-3-510

Sampled: 02/14/24 10:30 by Windsor Lee

4B14143-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/28/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/28/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/28/24	
1,1-Dichloroethane	0.38	0.27	0.50	ug/l	1	02/28/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/28/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/28/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/28/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/28/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/28/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/28/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/28/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/28/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/28/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/28/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/28/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/28/24	
Acetone	ND	3.1	5.0	ug/l	1	02/28/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/28/24	
Benzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/28/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/28/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/28/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/28/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/28/24	
Carbon tetrachloride	0.80	0.27	0.50	ug/l	1	02/28/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-3-510

Sampled: 02/14/24 10:30 by Windsor Lee

4B14143-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Chloroform	4.0	0.27	0.50	ug/l	1	02/28/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/28/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/28/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/28/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/28/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/28/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/28/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/28/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/28/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/28/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/28/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/28/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/28/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/28/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/28/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/28/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/28/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/28/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/28/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/28/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/28/24	
Styrene	ND	0.19	0.50	ug/l	1	02/28/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/28/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/28/24	
THMs, Total	4.0		0.50	ug/l	1	02/28/24	
Toluene	ND	0.29	0.50	ug/l	1	02/28/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/28/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/28/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-3-510

Sampled: 02/14/24 10:30 by Windsor Lee

4B14143-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	02/28/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/28/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.1	70-130			02/28/24	
4-Bromofluorobenzene	83%	Conc: 41.7	70-130			02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-511

Sampled: 02/14/24 8:40 by Windsor Lee

4B14143-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1491	Preparation: EPA 522/SPE		Prepared: 02/20/24 07:48		Analyst: mld		
1,4-Dioxane	3.9	0.028	0.070	ug/l	1	02/23/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	98%	Conc: 9.61	70-130			02/23/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1646	Preparation: EPA 5030B		Prepared: 02/21/24 09:27		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/22/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.8	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	02/24/24	
ADONA	ND	0.49	1.8	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	02/24/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	02/24/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	02/24/24	
PFBS	ND	0.51	1.8	ng/l	1	02/24/24	
PFDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFDoA	ND	0.58	1.8	ng/l	1	02/24/24	
PFHpA	ND	0.47	1.8	ng/l	1	02/24/24	
PFHxA	ND	0.43	1.8	ng/l	1	02/24/24	
PFHxS	ND	0.52	1.8	ng/l	1	02/24/24	
PFNA	ND	0.46	1.8	ng/l	1	02/24/24	
PFOA	ND	0.59	1.8	ng/l	1	02/24/24	
PFOS	ND	0.47	1.8	ng/l	1	02/24/24	
PFTeDA	ND	0.40	1.8	ng/l	1	02/24/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	02/24/24	
PFUnA	ND	0.42	1.8	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	116%	Conc: 41.0	70-130			02/24/24	
13C2-PFHxA	111%	Conc: 39.0	70-130			02/24/24	
d5-EtFOSAA	108%	Conc: 152	70-130			02/24/24	
HFPO-DA-13C3	102%	Conc: 36.0	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B14143

Page 15 of 37

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-511

Sampled: 02/14/24 8:40 by Windsor Lee

4B14143-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/28/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/28/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/28/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/28/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/28/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/28/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/28/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/28/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/28/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/28/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/28/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/28/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/28/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/28/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/28/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/28/24	
Acetone	ND	3.1	5.0	ug/l	1	02/28/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/28/24	
Benzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/28/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/28/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/28/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/28/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/28/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/28/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-511

Sampled: 02/14/24 8:40 by Windsor Lee

4B14143-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Chloroform	ND	0.27	0.50	ug/l	1	02/28/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/28/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/28/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/28/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/28/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/28/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/28/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/28/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/28/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/28/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/28/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/28/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/28/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/28/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/28/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/28/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/28/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/28/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/28/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/28/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/28/24	
Styrene	ND	0.19	0.50	ug/l	1	02/28/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/28/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/28/24	
THMs, Total	ND		0.50	ug/l	1	02/28/24	
Toluene	ND	0.29	0.50	ug/l	1	02/28/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/28/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/28/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-511

Sampled: 02/14/24 8:40 by Windsor Lee

4B14143-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/28/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/28/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.6	70-130			02/28/24	
4-Bromofluorobenzene	81%	Conc: 40.4	70-130			02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-511D

Sampled: 02/14/24 8:45 by Windsor Lee

4B14143-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1491	Preparation: EPA 522/SPE		Prepared: 02/20/24 07:48		Analyst: mld		
1,4-Dioxane	3.8	0.028	0.070	ug/l	1	02/23/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	96%	Conc: 10.1	70-130			02/23/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1646	Preparation: EPA 5030B		Prepared: 02/21/24 09:27		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/22/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	02/24/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	02/24/24	
ADONA	ND	0.48	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/24/24	
PFBS	ND	0.50	1.7	ng/l	1	02/24/24	
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.57	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.46	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.51	1.7	ng/l	1	02/24/24	
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	ND	0.58	1.7	ng/l	1	02/24/24	
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	114%	Conc: 39.5	70-130			02/24/24	
13C2-PFHxA	108%	Conc: 37.3	70-130			02/24/24	
d5-EtFOSAA	107%	Conc: 147	70-130			02/24/24	
HFPO-DA-13C3	103%	Conc: 35.7	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B14143

Page 19 of 37

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-511D

Sampled: 02/14/24 8:45 by Windsor Lee

4B14143-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/28/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/28/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/28/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/28/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/28/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/28/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/28/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/28/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/28/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/28/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/28/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/28/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/28/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/28/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/28/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/28/24	
Acetone	ND	3.1	5.0	ug/l	1	02/28/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/28/24	
Benzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/28/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/28/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/28/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/28/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/28/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/28/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-511D

Sampled: 02/14/24 8:45 by Windsor Lee

4B14143-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Chloroform	ND	0.27	0.50	ug/l	1	02/28/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/28/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/28/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/28/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/28/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/28/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/28/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/28/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/28/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/28/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/28/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/28/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/28/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/28/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/28/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/28/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/28/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/28/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/28/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/28/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/28/24	
Styrene	ND	0.19	0.50	ug/l	1	02/28/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/28/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/28/24	
THMs, Total	ND		0.50	ug/l	1	02/28/24	
Toluene	ND	0.29	0.50	ug/l	1	02/28/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/28/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/28/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-511D

Sampled: 02/14/24 8:45 by Windsor Lee

4B14143-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/28/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/28/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 39.8	70-130			02/28/24	
4-Bromofluorobenzene	81%	Conc: 40.5	70-130			02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-5233

Sampled: 02/14/24 9:55 by Windsor Lee

4B14143-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1491	Preparation: EPA 522/SPE		Prepared: 02/20/24 07:48		Analyst: mld		
1,4-Dioxane	0.37	0.028	0.070	ug/l	1	02/23/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	83%	Conc: 8.26	70-130			02/23/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1646	Preparation: EPA 5030B		Prepared: 02/21/24 09:27		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/22/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1582	Preparation: EPA 537/SPE		Prepared: 02/20/24 14:39		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.7	ng/l	1	02/24/24	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	02/24/24	
ADONA	ND	0.48	1.7	ng/l	1	02/24/24	
EtFOSAA	ND	0.42	1.7	ng/l	1	02/24/24	
HFPO-DA	ND	0.76	1.7	ng/l	1	02/24/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	02/24/24	
PFBS	ND	0.50	1.7	ng/l	1	02/24/24	
PFDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFDoA	ND	0.57	1.7	ng/l	1	02/24/24	
PFHpA	ND	0.47	1.7	ng/l	1	02/24/24	
PFHxA	ND	0.42	1.7	ng/l	1	02/24/24	
PFHxS	ND	0.52	1.7	ng/l	1	02/24/24	
PFNA	ND	0.45	1.7	ng/l	1	02/24/24	
PFOA	ND	0.58	1.7	ng/l	1	02/24/24	
PFOS	ND	0.46	1.7	ng/l	1	02/24/24	
PFTeDA	ND	0.39	1.7	ng/l	1	02/24/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	02/24/24	
PFUnA	ND	0.41	1.7	ng/l	1	02/24/24	
<i>Surrogate(s)</i>							
13C2-PFDA	109%	Conc: 37.8	70-130			02/24/24	
13C2-PFHxA	103%	Conc: 35.8	70-130			02/24/24	
d5-EtFOSAA	106%	Conc: 147	70-130			02/24/24	
HFPO-DA-13C3	97%	Conc: 34.0	70-130			02/24/24	

Volatile Organic Compounds by P&T and GC/MS

4B14143

Page 23 of 37

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-5233

Sampled: 02/14/24 9:55 by Windsor Lee

4B14143-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/28/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/28/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/28/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/28/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/28/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/28/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/28/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/28/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/28/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/28/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/28/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/28/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/28/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/28/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/28/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/28/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/28/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/28/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/28/24	
Acetone	ND	3.1	5.0	ug/l	1	02/28/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/28/24	
Benzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/28/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/28/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/28/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/28/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/28/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/28/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/28/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-5233

Sampled: 02/14/24 9:55 by Windsor Lee

4B14143-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Chloroform	ND	0.27	0.50	ug/l	1	02/28/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/28/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/28/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/28/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/28/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/28/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/28/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/28/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/28/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/28/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/28/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/28/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/28/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/28/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/28/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/28/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/28/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/28/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/28/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/28/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/28/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/28/24	
Styrene	ND	0.19	0.50	ug/l	1	02/28/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/28/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/28/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/28/24	
THMs, Total	ND		0.50	ug/l	1	02/28/24	
Toluene	ND	0.29	0.50	ug/l	1	02/28/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/28/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/28/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-3-5233

Sampled: 02/14/24 9:55 by Windsor Lee

4B14143-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B		Prepared: 02/27/24 12:08		Analyst: ADM	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/28/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/28/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.6	70-130			02/28/24	
4-Bromofluorobenzene	82%	Conc: 40.8	70-130			02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1491 - EPA 522										
Blank (W4B1491-BLK1)										
1,4-Dioxane	ND	0.028	0.070	ug/l						
Prepared: 02/20/24 Analyzed: 02/23/24										
Surrogate(s)										
1,4-Dioxane-d8	7.90			ug/l	10.0		79 70-130			
Blank (W4B1491-BLK2)										
1,4-Dioxane	ND	0.028	0.070	ug/l						QC-2
Prepared: 02/20/24 Analyzed: 02/26/24										
Surrogate(s)										
1,4-Dioxane-d8	8.08			ug/l	10.0		81 70-130			QC-2
LCS (W4B1491-BS1)										
1,4-Dioxane	0.0412	0.028	0.070	ug/l	0.0600		69 50-150			J
Prepared: 02/20/24 Analyzed: 02/23/24										
Surrogate(s)										
1,4-Dioxane-d8	8.91			ug/l	10.0		89 70-130			
LCS (W4B1491-BS2)										
1,4-Dioxane	0.0423	0.028	0.070	ug/l	0.0600		70 50-150			QC-2, J
Prepared: 02/20/24 Analyzed: 02/26/24										
Surrogate(s)										
1,4-Dioxane-d8	9.14			ug/l	10.0		91 70-130			QC-2
LCS Dup (W4B1491-BSD1)										
1,4-Dioxane	0.0452	0.028	0.070	ug/l	0.0600		75 50-150	9	50	J
Prepared: 02/20/24 Analyzed: 02/23/24										
Surrogate(s)										
1,4-Dioxane-d8	8.47			ug/l	10.0		85 70-130			
LCS Dup (W4B1491-BSD2)										
1,4-Dioxane	0.0463	0.028	0.070	ug/l	0.0600		77 50-150	9	50	QC-2, J
Prepared: 02/20/24 Analyzed: 02/26/24										
Surrogate(s)										
1,4-Dioxane-d8	8.60			ug/l	10.0		86 70-130			QC-2

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1646 - SRL 524M-TCP										
Blank (W4B1646-BLK1)										
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l						
Prepared: 02/21/24 Analyzed: 02/22/24										
LCS (W4B1646-BS1)										
1,2,3-Trichloropropane	0.0219	0.0012	0.0050	ug/l	0.0200		109 80-120			
Prepared: 02/21/24 Analyzed: 02/22/24										
LCS Dup (W4B1646-BSD1)										
1,2,3-Trichloropropane	0.0212	0.0012	0.0050	ug/l	0.0200		106 80-120	3	20	
Prepared: 02/21/24 Analyzed: 02/22/24										
Duplicate (W4B1646-DUP1)										
1,2,3-Trichloropropane	0.0462	0.0012	0.0050	ug/l		0.0416		11	20	
Source: 4B14143-01 Prepared: 02/21/24 Analyzed: 02/22/24										

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B1582 - EPA 537.1										
Blank (W4B1582-BLK1)					Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	ND	0.56	2.0	ng/l						
9CI-PF3ONS	ND	0.53	2.0	ng/l						
ADONA	ND	0.55	2.0	ng/l						
EtFOSAA	ND	0.48	2.0	ng/l						
HFPO-DA	ND	0.87	2.0	ng/l						
MeFOSAA	ND	0.58	2.0	ng/l						
PFBS	ND	0.58	2.0	ng/l						
PFDA	ND	0.45	2.0	ng/l						
PFDoA	ND	0.66	2.0	ng/l						
PFHpA	ND	0.53	2.0	ng/l						
PFHxA	ND	0.49	2.0	ng/l						
PFHxS	ND	0.59	2.0	ng/l						
PFNA	ND	0.52	2.0	ng/l						
PFOA	ND	0.67	2.0	ng/l						
PFOS	ND	0.53	2.0	ng/l						
PFTeDA	ND	0.45	2.0	ng/l						
PFTrDA	ND	0.42	2.0	ng/l						
PFUnA	ND	0.48	2.0	ng/l						
<i>Surrogate(s)</i>										
13C2-PFDA	45.2			ng/l	40.0		113 70-130			
13C2-PFHxA	43.6			ng/l	40.0		109 70-130			
d5-EtFOSAA	165			ng/l	160		103 70-130			
HFPO-DA-13C3	40.0			ng/l	40.0		100 70-130			
LCS (W4B1582-BS1)					Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	67.9	0.56	2.0	ng/l	80.0		85 70-130			
9CI-PF3ONS	68.1	0.53	2.0	ng/l	80.0		85 70-130			
ADONA	70.0	0.55	2.0	ng/l	80.0		88 70-130			
EtFOSAA	66.1	0.48	2.0	ng/l	80.0		83 70-130			
HFPO-DA	65.7	0.87	2.0	ng/l	80.0		82 70-130			
MeFOSAA	65.7	0.58	2.0	ng/l	80.0		82 70-130			
PFBS	73.4	0.58	2.0	ng/l	80.0		92 70-130			
PFDA	70.1	0.45	2.0	ng/l	80.0		88 70-130			
PFDoA	69.6	0.66	2.0	ng/l	80.0		87 70-130			
PFHpA	72.6	0.53	2.0	ng/l	80.0		91 70-130			
PFHxA	71.9	0.49	2.0	ng/l	80.0		90 70-130			
PFHxS	73.1	0.59	2.0	ng/l	80.0		91 70-130			
PFNA	72.8	0.52	2.0	ng/l	80.0		91 70-130			
PFOA	72.3	0.67	2.0	ng/l	80.0		90 70-130			
PFOS	71.4	0.53	2.0	ng/l	80.0		89 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1582 - EPA 537.1 (Continued)										
LCS (W4B1582-BS1)					Prepared: 02/20/24 Analyzed: 02/24/24					
PFTeDA	66.9	0.45	2.0	ng/l	80.0	84	70-130			
PFTTrDA	68.8	0.42	2.0	ng/l	80.0	86	70-130			
PFUnA	70.2	0.48	2.0	ng/l	80.0	88	70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	43.9			ng/l	40.0	110	70-130			
13C2-PFHxA	42.6			ng/l	40.0	106	70-130			
d5-EtFOSAA	158			ng/l	160	98	70-130			
HFPO-DA-13C3	39.6			ng/l	40.0	99	70-130			
LCS Dup (W4B1582-BSD1)					Prepared: 02/20/24 Analyzed: 02/24/24					
11CI-PF3OUdS	68.2	0.56	2.0	ng/l	80.0	85	70-130	0.5	30	
9CI-PF3ONS	68.6	0.53	2.0	ng/l	80.0	86	70-130	0.7	30	
ADONA	70.7	0.55	2.0	ng/l	80.0	88	70-130	0.9	30	
EtFOSAA	67.8	0.48	2.0	ng/l	80.0	85	70-130	3	30	
HFPO-DA	68.3	0.87	2.0	ng/l	80.0	85	70-130	4	30	
MeFOSAA	68.5	0.58	2.0	ng/l	80.0	86	70-130	4	30	
PFBS	73.4	0.58	2.0	ng/l	80.0	92	70-130	0.009	30	
PFDA	69.2	0.45	2.0	ng/l	80.0	87	70-130	1	30	
PFDoA	70.6	0.66	2.0	ng/l	80.0	88	70-130	1	30	
PFHpA	73.3	0.53	2.0	ng/l	80.0	92	70-130	1	30	
PFHxA	71.7	0.49	2.0	ng/l	80.0	90	70-130	0.3	30	
PFHxS	73.5	0.59	2.0	ng/l	80.0	92	70-130	0.5	30	
PFNA	73.4	0.52	2.0	ng/l	80.0	92	70-130	0.7	30	
PFOA	73.0	0.67	2.0	ng/l	80.0	91	70-130	1	30	
PFOS	71.2	0.53	2.0	ng/l	80.0	89	70-130	0.2	30	
PFTeDA	61.0	0.45	2.0	ng/l	80.0	76	70-130	9	30	
PFTTrDA	69.3	0.42	2.0	ng/l	80.0	87	70-130	0.8	30	
PFUnA	71.0	0.48	2.0	ng/l	80.0	89	70-130	1	30	
<i>Surrogate(s)</i>										
13C2-PFDA	44.5			ng/l	40.0	111	70-130			
13C2-PFHxA	43.0			ng/l	40.0	108	70-130			
d5-EtFOSAA	165			ng/l	160	103	70-130			
HFPO-DA-13C3	40.9			ng/l	40.0	102	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2189 - EPA 524.2											
Blank (W4B2189-BLK1)						Prepared: 02/27/24 Analyzed: 02/28/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2189 - EPA 524.2 (Continued)											
Blank (W4B2189-BLK1)						Prepared: 02/27/24 Analyzed: 02/28/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	39.0			ug/l	50.0		78	70-130			
4-Bromofluorobenzene	40.8			ug/l	50.0		82	70-130			
LCS (W4B2189-BS1)						Prepared: 02/27/24 Analyzed: 02/28/24					
1,1,1,2-Tetrachloroethane	4.84	0.24	0.50	ug/l	5.00		97	70-130			
1,1,1-Trichloroethane	4.60	0.26	0.50	ug/l	5.00		92	70-130			
1,1,2,2-Tetrachloroethane	4.47	0.20	0.50	ug/l	5.00		89	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2189 - EPA 524.2 (Continued)									
LCS (W4B2189-BS1)					Prepared: 02/27/24 Analyzed: 02/28/24				
1,1,2-Trichloroethane	4.64	0.19	0.50	ug/l	5.00	93	70-130		
1,1-Dichloroethane	4.52	0.27	0.50	ug/l	5.00	90	70-130		
1,1-Dichloroethene	4.28	0.16	0.50	ug/l	5.00	86	70-130		
1,1-Dichloropropene	4.19	0.14	0.50	ug/l	5.00	84	70-130		
1,2,3-Trichlorobenzene	4.80	0.40	0.50	ug/l	5.00	96	70-130		
1,2,3-Trichloropropane	4.82	0.22	0.50	ug/l	5.00	96	70-130		
1,2,4-Trichlorobenzene	4.85	0.17	0.50	ug/l	5.00	97	70-130		
1,2,4-Trimethylbenzene	4.41	0.20	0.50	ug/l	5.00	88	70-130		
1,2-Dichloroethane	4.42	0.24	0.50	ug/l	5.00	88	70-130		
1,2-Dichloropropane	4.28	0.13	0.50	ug/l	5.00	86	70-130		
1,3,5-Trimethylbenzene	4.48	0.17	0.50	ug/l	5.00	90	70-130		
1,3-Dichloropropane	4.72	0.27	0.50	ug/l	5.00	94	70-130		
2,2-Dichloropropane	3.85	0.17	0.50	ug/l	5.00	77	70-130		
2-Butanone	3.80	1.5	5.0	ug/l	5.00	76	70-130		J
2-Chlorotoluene	4.92	0.15	0.50	ug/l	5.00	98	70-130		
2-Hexanone	4.75	1.2	5.0	ug/l	5.00	95	70-130		J
4-Chlorotoluene	4.72	0.15	0.50	ug/l	5.00	94	70-130		
4-Methyl-2-pentanone	4.27	1.8	5.0	ug/l	5.00	85	70-130		J
Acetone	43.2	3.1	5.0	ug/l	50.0	86	70-130		
Benzene	4.39	0.15	0.50	ug/l	5.00	88	70-130		
Bromobenzene	4.98	0.15	0.50	ug/l	5.00	100	70-130		
Bromochloromethane	4.04	0.15	0.50	ug/l	5.00	81	70-130		
Bromodichloromethane	4.39	0.24	0.50	ug/l	5.00	88	70-130		
Bromoform	5.04	0.38	0.50	ug/l	5.00	101	70-130		
Bromomethane	4.52	0.27	0.50	ug/l	5.00	90	70-130		
Carbon Disulfide	4.39	0.25	0.50	ug/l	5.00	88	70-130		
Carbon tetrachloride	4.65	0.27	0.50	ug/l	5.00	93	70-130		
Chlorobenzene	5.19	0.15	0.50	ug/l	5.00	104	70-130		
Chloroethane	4.48	0.17	0.50	ug/l	5.00	90	70-130		
Chloroform	4.36	0.27	0.50	ug/l	5.00	87	70-130		
Chloromethane	4.07	0.23	0.50	ug/l	5.00	81	70-130		
cis-1,2-Dichloroethene	4.19	0.25	0.50	ug/l	5.00	84	70-130		
cis-1,3-Dichloropropene	4.30	0.30	0.50	ug/l	5.00	86	70-130		
Dibromochloromethane	4.86	0.20	0.50	ug/l	5.00	97	70-130		
Dibromomethane	4.55	0.20	0.50	ug/l	5.00	91	70-130		
Dichlorodifluoromethane (Freon 12)	4.31	0.45	0.50	ug/l	5.00	86	70-130		
Di-isopropyl ether	16.8	1.1	2.0	ug/l	20.0	84	70-130		
Ethyl tert-butyl ether	18.4	1.0	2.0	ug/l	20.0	92	70-130		
Ethylbenzene	4.54	0.21	0.50	ug/l	5.00	91	70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2189 - EPA 524.2 (Continued)										
LCS (W4B2189-BS1)					Prepared: 02/27/24 Analyzed: 02/28/24					
Freon 113	4.53	1.5	5.0	ug/l	5.00	91	70-130			J
Hexachlorobutadiene	4.94	0.40	0.50	ug/l	5.00	99	70-130			
Isopropylbenzene	4.51	0.18	0.50	ug/l	5.00	90	70-130			
m,p-Xylene	4.48	0.33	0.50	ug/l	5.00	90	70-130			
m-Dichlorobenzene	4.64	0.14	0.50	ug/l	5.00	93	70-130			
Methyl tert-butyl ether (MTBE)	18.5	0.94	2.0	ug/l	20.0	92	70-130			
Methylene chloride	3.96	0.30	0.50	ug/l	5.00	79	70-130			
Naphthalene	4.30	0.35	0.50	ug/l	5.00	86	70-130			
n-Butylbenzene	4.48	0.29	0.50	ug/l	5.00	90	70-130			
n-Propylbenzene	4.38	0.18	0.50	ug/l	5.00	88	70-130			
o-Dichlorobenzene	4.75	0.19	0.50	ug/l	5.00	95	70-130			
o-Xylene	4.55	0.20	0.50	ug/l	5.00	91	70-130			
p-Dichlorobenzene	4.78	0.18	0.50	ug/l	5.00	96	70-130			
p-Isopropyltoluene	4.43	0.25	0.50	ug/l	5.00	89	70-130			
sec-Butylbenzene	4.34	0.24	0.50	ug/l	5.00	87	70-130			
Styrene	4.75	0.19	0.50	ug/l	5.00	95	70-130			
Tert-amyl methyl ether	19.2	0.59	2.0	ug/l	20.0	96	70-130			
tert-Butylbenzene	4.41	0.18	0.50	ug/l	5.00	88	70-130			
Tetrachloroethene	6.24	0.18	0.50	ug/l	5.00	125	70-130			
Toluene	4.47	0.29	0.50	ug/l	5.00	89	70-130			
trans-1,2-Dichloroethene	4.36	0.26	0.50	ug/l	5.00	87	70-130			
trans-1,3-Dichloropropene	5.00	0.32	0.50	ug/l	5.00	100	70-130			
Trichloroethene	4.80	0.18	0.50	ug/l	5.00	96	70-130			
Trichlorofluoromethane	4.69	0.18	0.50	ug/l	5.00	94	70-130			
Vinyl chloride	4.11	0.18	0.50	ug/l	5.00	82	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	45.5			ug/l	50.0	91	70-130			
4-Bromofluorobenzene	45.7			ug/l	50.0	91	70-130			
LCS Dup (W4B2189-BSD1)					Prepared: 02/27/24 Analyzed: 02/28/24					
1,1,1,2-Tetrachloroethane	4.66	0.24	0.50	ug/l	5.00	93	70-130	4	30	
1,1,1-Trichloroethane	4.44	0.26	0.50	ug/l	5.00	89	70-130	3	30	
1,1,2,2-Tetrachloroethane	4.29	0.20	0.50	ug/l	5.00	86	70-130	4	30	
1,1,2-Trichloroethane	4.57	0.19	0.50	ug/l	5.00	91	70-130	2	30	
1,1-Dichloroethane	4.41	0.27	0.50	ug/l	5.00	88	70-130	2	30	
1,1-Dichloroethene	4.10	0.16	0.50	ug/l	5.00	82	70-130	4	30	
1,1-Dichloropropene	3.91	0.14	0.50	ug/l	5.00	78	70-130	7	30	
1,2,3-Trichlorobenzene	4.63	0.40	0.50	ug/l	5.00	93	70-130	4	30	
1,2,3-Trichloropropane	4.66	0.22	0.50	ug/l	5.00	93	70-130	3	30	
1,2,4-Trichlorobenzene	4.70	0.17	0.50	ug/l	5.00	94	70-130	3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2189 - EPA 524.2 (Continued)											
LCS Dup (W4B2189-BSD1)											
					Prepared: 02/27/24 Analyzed: 02/28/24						
1,2,4-Trimethylbenzene	4.18	0.20	0.50	ug/l	5.00	84	70-130	5	30		
1,2-Dichloroethane	4.44	0.24	0.50	ug/l	5.00	89	70-130	0.5	30		
1,2-Dichloropropane	4.26	0.13	0.50	ug/l	5.00	85	70-130	0.5	30		
1,3,5-Trimethylbenzene	4.26	0.17	0.50	ug/l	5.00	85	70-130	5	30		
1,3-Dichloropropane	4.67	0.27	0.50	ug/l	5.00	93	70-130	1	30		
2,2-Dichloropropane	4.02	0.17	0.50	ug/l	5.00	80	70-130	4	30		
2-Butanone	4.00	1.5	5.0	ug/l	5.00	80	70-130	5	30		J
2-Chlorotoluene	4.66	0.15	0.50	ug/l	5.00	93	70-130	5	30		
2-Hexanone	4.66	1.2	5.0	ug/l	5.00	93	70-130	2	30		J
4-Chlorotoluene	4.57	0.15	0.50	ug/l	5.00	91	70-130	3	30		
4-Methyl-2-pentanone	4.26	1.8	5.0	ug/l	5.00	85	70-130	0.3	30		J
Acetone	44.4	3.1	5.0	ug/l	50.0	89	70-130	3	30		
Benzene	4.13	0.15	0.50	ug/l	5.00	83	70-130	6	30		
Bromobenzene	4.84	0.15	0.50	ug/l	5.00	97	70-130	3	30		
Bromochloromethane	4.02	0.15	0.50	ug/l	5.00	80	70-130	0.5	30		
Bromodichloromethane	4.28	0.24	0.50	ug/l	5.00	86	70-130	3	30		
Bromoform	5.07	0.38	0.50	ug/l	5.00	101	70-130	0.6	30		
Bromomethane	4.40	0.27	0.50	ug/l	5.00	88	70-130	3	30		
Carbon Disulfide	4.11	0.25	0.50	ug/l	5.00	82	70-130	7	30		
Carbon tetrachloride	4.37	0.27	0.50	ug/l	5.00	87	70-130	6	30		
Chlorobenzene	4.85	0.15	0.50	ug/l	5.00	97	70-130	7	30		
Chloroethane	3.91	0.17	0.50	ug/l	5.00	78	70-130	14	30		
Chloroform	4.19	0.27	0.50	ug/l	5.00	84	70-130	4	30		
Chloromethane	3.91	0.23	0.50	ug/l	5.00	78	70-130	4	30		
cis-1,2-Dichloroethene	4.12	0.25	0.50	ug/l	5.00	82	70-130	2	30		
cis-1,3-Dichloropropene	4.30	0.30	0.50	ug/l	5.00	86	70-130	0.07	30		
Dibromochloromethane	4.69	0.20	0.50	ug/l	5.00	94	70-130	4	30		
Dibromomethane	4.55	0.20	0.50	ug/l	5.00	91	70-130	0.2	30		
Dichlorodifluoromethane (Freon 12)	3.99	0.45	0.50	ug/l	5.00	80	70-130	8	30		
Di-isopropyl ether	17.1	1.1	2.0	ug/l	20.0	85	70-130	2	30		
Ethyl tert-butyl ether	18.5	1.0	2.0	ug/l	20.0	93	70-130	0.7	30		
Ethylbenzene	4.25	0.21	0.50	ug/l	5.00	85	70-130	7	30		
Freon 113	4.25	1.5	5.0	ug/l	5.00	85	70-130	6	30		J
Hexachlorobutadiene	4.60	0.40	0.50	ug/l	5.00	92	70-130	7	30		
Isopropylbenzene	4.17	0.18	0.50	ug/l	5.00	83	70-130	8	30		
m,p-Xylene	4.24	0.33	0.50	ug/l	5.00	85	70-130	6	30		
m-Dichlorobenzene	4.44	0.14	0.50	ug/l	5.00	89	70-130	4	30		
Methyl tert-butyl ether (MTBE)	19.0	0.94	2.0	ug/l	20.0	95	70-130	3	30		
Methylene chloride	3.95	0.30	0.50	ug/l	5.00	79	70-130	0.3	30		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/08/2024 15:36

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2189 - EPA 524.2 (Continued)											
LCS Dup (W4B2189-BSD1)						Prepared: 02/27/24 Analyzed: 02/28/24					
Naphthalene	4.31	0.35	0.50	ug/l	5.00	86	70-130	0.4	30		
n-Butylbenzene	4.11	0.29	0.50	ug/l	5.00	82	70-130	9	30		
n-Propylbenzene	4.03	0.18	0.50	ug/l	5.00	81	70-130	8	30		
o-Dichlorobenzene	4.55	0.19	0.50	ug/l	5.00	91	70-130	4	30		
o-Xylene	4.31	0.20	0.50	ug/l	5.00	86	70-130	6	30		
p-Dichlorobenzene	4.63	0.18	0.50	ug/l	5.00	93	70-130	3	30		
p-Isopropyltoluene	4.12	0.25	0.50	ug/l	5.00	82	70-130	7	30		
sec-Butylbenzene	4.03	0.24	0.50	ug/l	5.00	81	70-130	7	30		
Styrene	4.54	0.19	0.50	ug/l	5.00	91	70-130	5	30		
Tert-amyl methyl ether	19.3	0.59	2.0	ug/l	20.0	97	70-130	0.5	30		
tert-Butylbenzene	4.12	0.18	0.50	ug/l	5.00	82	70-130	7	30		
Tetrachloroethene	5.54	0.18	0.50	ug/l	5.00	111	70-130	12	30		
Toluene	4.31	0.29	0.50	ug/l	5.00	86	70-130	4	30		
trans-1,2-Dichloroethene	4.19	0.26	0.50	ug/l	5.00	84	70-130	4	30		
trans-1,3-Dichloropropene	4.85	0.32	0.50	ug/l	5.00	97	70-130	3	30		
Trichloroethene	4.62	0.18	0.50	ug/l	5.00	92	70-130	4	30		
Trichlorofluoromethane	4.35	0.18	0.50	ug/l	5.00	87	70-130	8	30		
Vinyl chloride	3.98	0.18	0.50	ug/l	5.00	80	70-130	3	30		
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	44.9			ug/l	50.0	90	70-130				
4-Bromofluorobenzene	45.1			ug/l	50.0	90	70-130				

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/08/2024 15:36

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **4814143**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: COSM 97-005 - COPCs		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: (213) 271-2237 ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package	
PROJECT MANAGER Chris Kindel		SAMPLER Windsor Lee						invoice to Rose Ford, Rford@BrwnCald.com	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	COMMENTS
	2/14/24	9:20	grab	AT-GS-3-S4	9	✓	✓	✓	✓	
	2/14/24		grab	AT-GS-3-S7	9	✓	✓	✓	✓	
	2/14/24	9:05	grab	AT-GS-3-S8	9	✓	✓	✓	✓	
	2/14/24	10:30	grab	AT-UV-3-S10	9	✓	✓	✓	✓	
	2/14/24	8:40	grab	AT-GAL-3-S11	9	✓	✓	✓	✓	
	2/14/24	8:45	grab	AT-GAL-3-S11D	9	✓	✓	✓	✓	
	2/14/24	9:55	grab	AT-GAL-3-S23	9	✓	✓	✓	✓	
	2/14/24		grab	AT-RO-3-S14	9	✓	✓	✓	✓	
	2/14/24		grab	AT-RO-3-S24	9	✓	✓	✓	✓	
	2/14/24		grab	AT-DEL-3-S18	9	✓	✓	✓	✓	
	2/14/24		grab	AT-DEL-3-S19	9	✓	✓	✓	✓	
	2/14/24		grab	AT-RES-3-S22	9	✓	✓	✓	✓	

RELINQUISHED BY <i>Hella Ng</i>	DATE / TIME 2/14/24 1350	RECEIVED BY <i>[Signature]</i> 2/14/24 1350	SAMPLE CONDITION: Actual Temperature: <i>4.1 T-028</i> Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 2/14/24 1529	RECEIVED BY <i>[Signature]</i> 2/14/24 1527		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

Client's are responsible for confirming the accuracy of the Chain-of-custody prior to sample submittal. Weck Laboratories is not responsible for verifying compliance monitoring schedules.

JB 2/14/24

COC version 04/2010



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: **4B14143**

Date/Time Received: **02/14/24 @ 15:32**

WKO Logged by: **Jerico Bolotano**

of Samples: **06**

Samples Checked by: **Jerico Bolotano**

Delivered by: **Client**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>			4.1°C
Ice Type (Blue/Wet)				Wet
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Project Manager notified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (See comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <6mm/Pea size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2; 6710B<2; 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CI Test Strip Lot# 11032201
Free Chlorine Tested <0.1 (Organic Analyses)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading:
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acid Lot#
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Amf added:

PM Comments

Sample Receipt Checklist Prepared by:

Signature: *Jerico Bolotano*

Date: **02/14/24**

Work Orders: 4B15085

Report Date: 3/13/2024

Received Date: 2/15/2024

Project: City of Santa Monica - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

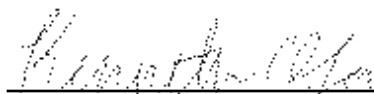
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/15/24 with the Chain-of-Custody document. The samples were received in good condition, at 5.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/13/2024 10:42

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-1-57	Windsor Lee	4B15085-01	Water	02/12/24 12:30	
AT-GS-2-54	Windsor Lee	4B15085-02	Water	02/13/24 09:05	
AT-GS-2-57	Windsor Lee	4B15085-03	Water	02/13/24 10:40	
AT-RES-2-522	Windsor Lee	4B15085-04	Water	02/13/24 12:30	
AT-GS-1-58	Windsor Lee	4B15085-05	Water	02/13/24 12:10	
AT-GS-1-58 Field Blank	Windsor Lee	4B15085-06	Water	02/13/24 12:10	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
03/13/2024 10:42

Sample Results

Sample: AT-GS-1-57

Sampled: 02/12/24 12:30 by Windsor Lee

4B15085-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0269	Preparation: _NONE (TOC/TOX)					Analyst: rem
Total Organic Carbon (TOC)	0.66	0.30	mg/l	1	03/05/24	

Sample Results

Sample: AT-GS-2-54

Sampled: 02/13/24 9:05 by Windsor Lee

4B15085-02RE1 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0576	Preparation: _NONE (TOC/TOX)					Analyst: rem
Total Organic Carbon (TOC)	0.63	0.30	mg/l	1	03/07/24	

Sample Results

Sample: AT-GS-2-57

Sampled: 02/13/24 10:40 by Windsor Lee

4B15085-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0269	Preparation: _NONE (TOC/TOX)					Analyst: rem
Total Organic Carbon (TOC)	0.77	0.30	mg/l	1	03/05/24	

Sample Results

Sample: AT-RES-2-522

Sampled: 02/13/24 12:30 by Windsor Lee

4B15085-04 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0269	Preparation: _NONE (TOC/TOX)					Analyst: rem
Total Organic Carbon (TOC)	ND	0.30	mg/l	1	03/05/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/13/2024 10:42

Sample Results

(Continued)

Sample: AT-GS-1-58

Sampled: 02/13/24 12:10 by Windsor Lee

4B15085-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS						
Method: EPA 537.1			Instr: LCMS06			
Batch ID: W4B1913		Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA
11CI-PF3OUdS	ND	1.8	ng/l	1	03/02/24	
9CI-PF3ONS	ND	1.8	ng/l	1	03/02/24	
ADONA	ND	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	1.8	ng/l	1	03/02/24	
PFBS	2.3	1.8	ng/l	1	03/02/24	
PFDA	ND	1.8	ng/l	1	03/02/24	
PFDoA	ND	1.8	ng/l	1	03/02/24	
PFHpA	ND	1.8	ng/l	1	03/02/24	
PFHxA	2.3	1.8	ng/l	1	03/02/24	
PFHxS	ND	1.8	ng/l	1	03/02/24	
PFNA	ND	1.8	ng/l	1	03/02/24	
PFOA	ND	1.8	ng/l	1	03/02/24	
PFOS	ND	1.8	ng/l	1	03/02/24	
PFTeDA	ND	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	1.8	ng/l	1	03/02/24	
PFUnA	ND	1.8	ng/l	1	03/02/24	
<i>Surrogate(s)</i>						
13C2-PFDA	122%	Conc: 43.3	70-130		03/02/24	
13C2-PFHxA	111%	Conc: 39.4	70-130		03/02/24	
d5-EtFOSAA	111%	Conc: 158	70-130		03/02/24	
HFPO-DA-13C3	105%	Conc: 37.5	70-130		03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/13/2024 10:42

Sample Results

(Continued)

Sample: AT-GS-1-58 Field Blank

Sampled: 02/13/24 12:10 by Windsor Lee

4B15085-06 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS						
Method: EPA 537.1			Instr: LCMS06			
Batch ID: W4B1913		Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA
11CI-PF3OUdS	ND	1.7	ng/l	1	03/02/24	
9CI-PF3ONS	ND	1.7	ng/l	1	03/02/24	
ADONA	ND	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	1.7	ng/l	1	03/02/24	
PFBS	ND	1.7	ng/l	1	03/02/24	
PFDA	ND	1.7	ng/l	1	03/02/24	
PFDoA	ND	1.7	ng/l	1	03/02/24	
PFHpA	ND	1.7	ng/l	1	03/02/24	
PFHxA	ND	1.7	ng/l	1	03/02/24	
PFHxS	ND	1.7	ng/l	1	03/02/24	
PFNA	ND	1.7	ng/l	1	03/02/24	
PFOA	ND	1.7	ng/l	1	03/02/24	
PFOS	ND	1.7	ng/l	1	03/02/24	
PFTeDA	ND	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	1.7	ng/l	1	03/02/24	
PFUnA	ND	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>						
13C2-PFDA	125% Conc: 42.2	70-130			03/02/24	
13C2-PFHxA	119% Conc: 40.0	70-130			03/02/24	
d5-EtFOSAA	113% Conc: 152	70-130			03/02/24	
HFPO-DA-13C3	113% Conc: 37.9	70-130			03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water
 Quality
Project Manager: Brown & Caldwell

Reported:
 03/13/2024 10:42

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0269 - SM 5310B										
Blank (W4C0269-BLK1)										
Total Organic Carbon (TOC)	ND	0.30	mg/l	Prepared & Analyzed: 03/05/24						
LCS (W4C0269-BS1)										
Total Organic Carbon (TOC)	1.05	0.30	mg/l	1.00	105	85-115				
Matrix Spike (W4C0269-MS1)										
Total Organic Carbon (TOC)	9.80	0.30	mg/l	5.00	4.98	96	76-115			
Matrix Spike Dup (W4C0269-MSD1)										
Total Organic Carbon (TOC)	9.39	0.30	mg/l	5.00	4.98	88	76-115	4	20	
Batch: W4C0576 - SM 5310B										
Blank (W4C0576-BLK1)										
Total Organic Carbon (TOC)	ND	0.30	mg/l	Prepared & Analyzed: 03/07/24						
LCS (W4C0576-BS1)										
Total Organic Carbon (TOC)	0.960	0.30	mg/l	1.00	96	85-115				
Matrix Spike (W4C0576-MS1)										
Total Organic Carbon (TOC)	5.80	0.30	mg/l	5.00	1.39	88	76-115			
Matrix Spike Dup (W4C0576-MSD1)										
Total Organic Carbon (TOC)	5.64	0.30	mg/l	5.00	1.39	85	76-115	3	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
03/13/2024 10:42

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1913 - EPA 537.1									
Blank (W4B1913-BLK1)					Prepared: 02/22/24 Analyzed: 03/02/24				
11CI-PF3OUdS	ND	2.0	ng/l						
9CI-PF3ONS	ND	2.0	ng/l						
ADONA	ND	2.0	ng/l						
EtFOSAA	ND	2.0	ng/l						
HFPO-DA	ND	2.0	ng/l						
MeFOSAA	ND	2.0	ng/l						
PFBS	ND	2.0	ng/l						
PFDA	ND	2.0	ng/l						
PFDoA	ND	2.0	ng/l						
PFHpA	ND	2.0	ng/l						
PFHxA	ND	2.0	ng/l						
PFHxS	ND	2.0	ng/l						
PFNA	ND	2.0	ng/l						
PFOA	ND	2.0	ng/l						
PFOS	ND	2.0	ng/l						
PFTeDA	ND	2.0	ng/l						
PFTrDA	ND	2.0	ng/l						
PFUnA	ND	2.0	ng/l						
<i>Surrogate(s)</i>									
13C2-PFDA	48.5		ng/l	40.0		121 70-130			
13C2-PFHxA	45.9		ng/l	40.0		115 70-130			
d5-EtFOSAA	173		ng/l	160		108 70-130			
HFPO-DA-13C3	43.0		ng/l	40.0		108 70-130			
LCS (W4B1913-BS1)					Prepared: 02/22/24 Analyzed: 03/02/24				
11CI-PF3OUdS	17.4	2.0	ng/l	20.0		87 70-130			
9CI-PF3ONS	17.3	2.0	ng/l	20.0		87 70-130			
ADONA	19.2	2.0	ng/l	20.0		96 70-130			
EtFOSAA	18.6	2.0	ng/l	20.0		93 70-130			
HFPO-DA	18.5	2.0	ng/l	20.0		93 70-130			
MeFOSAA	18.9	2.0	ng/l	20.0		95 70-130			
PFBS	19.7	2.0	ng/l	20.0		98 70-130			
PFDA	18.4	2.0	ng/l	20.0		92 70-130			
PFDoA	18.7	2.0	ng/l	20.0		94 70-130			
PFHpA	19.9	2.0	ng/l	20.0		100 70-130			
PFHxA	19.5	2.0	ng/l	20.0		97 70-130			
PFHxS	19.3	2.0	ng/l	20.0		97 70-130			
PFNA	19.5	2.0	ng/l	20.0		98 70-130			
PFOA	20.0	2.0	ng/l	20.0		100 70-130			
PFOS	18.6	2.0	ng/l	20.0		93 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/13/2024 10:42

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1913 - EPA 537.1 (Continued)									
LCS (W4B1913-BS1)					Prepared: 02/22/24 Analyzed: 03/02/24				
PFTeDA	18.0	2.0	ng/l	20.0		90 70-130			
PFTTrDA	18.2	2.0	ng/l	20.0		91 70-130			
PFUnA	18.9	2.0	ng/l	20.0		94 70-130			
<i>Surrogate(s)</i>									
13C2-PFDA	48.5		ng/l	40.0		121 70-130			
13C2-PFHxA	46.0		ng/l	40.0		115 70-130			
d5-EtFOSAA	180		ng/l	160		112 70-130			
HFPO-DA-13C3	43.7		ng/l	40.0		109 70-130			
LCS Dup (W4B1913-BSD1)					Prepared: 02/22/24 Analyzed: 03/02/24				
11CI-PF3OUdS	17.8	2.0	ng/l	20.0		89 70-130	2	30	
9CI-PF3ONS	18.0	2.0	ng/l	20.0		90 70-130	4	30	
ADONA	19.9	2.0	ng/l	20.0		99 70-130	3	30	
EtFOSAA	18.2	2.0	ng/l	20.0		91 70-130	3	30	
HFPO-DA	18.7	2.0	ng/l	20.0		93 70-130	0.9	30	
MeFOSAA	18.9	2.0	ng/l	20.0		94 70-130	0.3	30	
PFBS	19.7	2.0	ng/l	20.0		99 70-130	0.3	30	
PFDA	18.3	2.0	ng/l	20.0		91 70-130	0.9	30	
PFDoA	19.3	2.0	ng/l	20.0		96 70-130	3	30	
PFHpA	20.4	2.0	ng/l	20.0		102 70-130	2	30	
PFHxA	19.9	2.0	ng/l	20.0		100 70-130	2	30	
PFHxS	19.7	2.0	ng/l	20.0		98 70-130	2	30	
PFNA	20.2	2.0	ng/l	20.0		101 70-130	4	30	
PFOA	20.2	2.0	ng/l	20.0		101 70-130	0.8	30	
PFOS	19.1	2.0	ng/l	20.0		95 70-130	2	30	
PFTeDA	17.6	2.0	ng/l	20.0		88 70-130	2	30	
PFTTrDA	18.2	2.0	ng/l	20.0		91 70-130	0.07	30	
PFUnA	19.3	2.0	ng/l	20.0		97 70-130	2	30	
<i>Surrogate(s)</i>									
13C2-PFDA	48.5		ng/l	40.0		121 70-130			
13C2-PFHxA	47.6		ng/l	40.0		119 70-130			
d5-EtFOSAA	175		ng/l	160		110 70-130			
HFPO-DA-13C3	45.2		ng/l	40.0		113 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/13/2024 10:42

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B16030

Report Date: 4/04/2024

Received Date: 2/15/2024

Project: City of Santa Monica - 97-005 DDW Standards

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

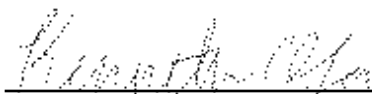
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/15/24 with the Chain-of-Custody document. The samples were received in good condition, at 3.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-4-S22	Earl Garcia	4B16030-01	Water	02/15/24 11:55	
AT-RES-3-S22	Earl Garcia	4B16030-02	Water	02/15/24 14:50	
AT-RES-4-S22 Trip Blank	Earl Garcia	4B16030-03	Water	02/15/24 00:00	
AT-RES-3-S22 Trip Blank	Earl Garcia	4B16030-04	Water	02/15/24 00:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 1613B in Water				
2,3,7,8-TCDD (Dioxin)	1746-01-6		⊗	
EPA 508.1 in Water				
Aldrin	309-00-2	⊗		⊗
alpha-BHC	319-84-6	⊗		⊗
beta-BHC	319-85-7	⊗		⊗
delta-BHC	319-86-8	⊗		⊗
gamma-BHC (Lindane)	58-89-9			⊗
4,4'-DDD	72-54-8	⊗		⊗
4,4'-DDE	72-55-9	⊗		⊗
4,4'-DDT	50-29-3	⊗		⊗
Dieldrin	60-57-1	⊗		⊗
Endosulfan I	959-98-8	⊗		⊗
Endosulfan II	33213-65-9	⊗		⊗
Endosulfan sulfate	1031-07-8	⊗		⊗
Endrin aldehyde	7421-93-4	⊗		⊗
Chlorothalonil	1897-45-6	⊗	⊗	⊗
Trifluralin	1582-09-8	⊗		⊗
Toxaphene	8001-35-2			⊗
PCBs, Total				⊗
EPA 515.4 in Water				
3,5-Dichlorobenzoic acid	51-36-5	⊗		⊗
Dichloroprop	120-36-5	⊗		⊗
2,4,5-T	93-76-5	⊗		⊗
2,4-DB	94-82-6	⊗		⊗
DCPA	1861-32-1	⊗		⊗
Acifluorfen	50594-66-6	⊗		⊗
Chloramben	133-90-4	⊗	⊗	⊗
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water (Continued)				
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3			⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
EPA 525.2 in Water				
Bromacil	314-40-9	⊗		⊗
Captan	133-06-2	⊗	⊗	⊗
Chlorpropham	101-21-3	⊗		⊗
Diazinon	333-41-5	⊗		⊗
Dimethoate	60-51-5	⊗	⊗	⊗
Diphenamid	957-51-7	⊗		⊗
Disulfoton	298-04-4	⊗		⊗
EPTC	759-94-4	⊗		⊗
Metolachlor	51218-45-2	⊗		⊗
Metribuzin	21087-64-9	⊗		⊗
Prometryn	7287-19-6	⊗		⊗
Terbacil	5902-51-2	⊗		⊗
Trithion	786-19-6	⊗	⊗	⊗
EPA 531.2 in Water				
Propoxur (Baygon)	114-26-1	⊗		⊗
Methiocarb	2032-65-7	⊗		⊗
EPA 556 in Water				
Formaldehyde	50-00-0	⊗	⊗	⊗
2,4,5-TFAP	129322-83-4	⊗	⊗	⊗
EPA 8015B in Water				



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW
 Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 8015B in Water (Continued)				
Ethylene glycol	107-21-1	⊗		⊗
EPA 900.0 in Water				
Gross Alpha			⊗	
Gross Beta			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

Sample: AT-RES-4-S22

Sampled: 02/15/24 11:55 by Earl Garcia

4B16030-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Aldehydes and Carbonyl Compounds by GC/ECD							
Method: EPA 556			Instr: GC08				
Batch ID: W4B1809		Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08	
Formaldehyde	8.6	0.86	2.0	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
2,4,5-TFAP	93%	Conc: 18.2	70-130			03/01/24	

Carbamates and Urea Pesticides

Method: EPA 531.2			Instr: LC11				
Batch ID: W4B2044		Preparation: _NONE (LC)		Prepared: 02/25/24 10:29		Analyst: cam	
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l	1	02/25/24	
Aldicarb	ND	0.58	2.0	ug/l	1	02/25/24	
Aldicarb sulfone	ND	0.73	2.0	ug/l	1	02/25/24	
Aldicarb sulfoxide	ND	1.0	2.0	ug/l	1	02/25/24	
Carbaryl	ND	1.0	2.0	ug/l	1	02/25/24	
Carbofuran	ND	1.0	2.0	ug/l	1	02/25/24	
Methiocarb	ND	1.0	2.0	ug/l	1	02/25/24	
Methomyl	ND	1.3	2.0	ug/l	1	02/25/24	
Oxamyl	ND	1.1	2.0	ug/l	1	02/25/24	
Propoxur (Baygon)	ND	1.4	2.0	ug/l	1	02/25/24	
<i>Surrogate(s)</i>							
BDMC	129%	Conc: 12.9	70-130			02/25/24	

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.4			Instr: GC08				
Batch ID: W4B2149		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/27/24 08:15		Analyst: alf	
2,4,5-T	ND	0.065	0.20	ug/l	1	03/12/24	
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l	1	03/12/24	
2,4-D	ND	0.14	0.40	ug/l	1	03/12/24	
2,4-DB	ND	0.19	2.0	ug/l	1	03/12/24	
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l	1	03/12/24	
Acifluorfen	ND	0.030	0.40	ug/l	1	03/12/24	
Bentazon	ND	0.23	2.0	ug/l	1	03/12/24	
Dalapon	ND	0.11	0.40	ug/l	1	03/12/24	
DCPA	ND	0.029	0.10	ug/l	1	03/12/24	
Dicamba	ND	0.15	0.60	ug/l	1	03/12/24	
Dichloroprop	ND	0.12	0.30	ug/l	1	03/12/24	
Dinoseb	ND	0.033	0.40	ug/l	1	03/12/24	
Pentachlorophenol	ND	0.014	0.20	ug/l	1	03/12/24	
Picloram	ND	0.050	0.60	ug/l	1	03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22

Sampled: 02/15/24 11:55 by Earl Garcia

4B16030-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Acids Herbicides by GC/ECD (Continued)							
Method: EPA 515.4				Instr: GC08			
Batch ID: W4B2149		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/27/24 08:15		Analyst: alf	
<i>Surrogate(s)</i>							
2,4-DCAA	98%	Conc: 9.79	70-130			03/12/24	

Chlorinated Pesticides and/or PCBs by GC/ECD

Method: EPA 508.1				Instr: GC08			
Batch ID: W4B2423		Preparation: EPA 508.1/SPE		Prepared: 02/29/24 08:34		Analyst: alf	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	03/06/24	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
4,4'-DDT	ND	0.0030	0.010	ug/l	1	03/06/24	
Aldrin	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
alpha-BHC	ND	0.0015	0.010	ug/l	1	03/06/24	
Aroclor 1016	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1221	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1232	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1242	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1248	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1254	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1260	ND	0.10	0.10	ug/l	1	03/06/24	Q-02
beta-BHC	ND	0.010	0.010	ug/l	1	03/06/24	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	03/06/24	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	03/06/24	
delta-BHC	ND	0.0030	0.010	ug/l	1	03/06/24	
Dieldrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endosulfan I	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endosulfan II	ND	0.0019	0.010	ug/l	1	03/06/24	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	03/06/24	
Heptachlor	ND	0.010	0.010	ug/l	1	03/06/24	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	03/06/24	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	03/06/24	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	03/06/24	
Methoxychlor	ND	0.0030	0.010	ug/l	1	03/06/24	
PCBs, Total	ND	0.10	0.50	ug/l	1	03/06/24	
Propachlor	ND	0.045	0.20	ug/l	1	03/06/24	

4B16030

Page 6 of 60

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22

Sampled: 02/15/24 11:55 by Earl Garcia

4B16030-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1

Instr: GC08

Batch ID: W4B2423

Preparation: EPA 508.1/SPE

Prepared: 02/29/24 08:34

Analyst: alf

Toxaphene ND 0.37 1.0 ug/l 1 03/06/24

Trifluralin ND 0.0043 0.010 ug/l 1 03/06/24

Surrogate(s)

4,4-Dibromobiphenyl 86% Conc: 0.0926 70-130 03/06/24

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 335.4

Instr: AA01

Batch ID: W4B2161

Preparation: _NONE (WETCHEM)

Prepared: 02/27/24 09:33

Analyst: kac

Cyanide, Total 17 5.0 ug/l 1 02/28/24

Diquat and Paraquat by EPA 549.2

Method: EPA 549.2

Instr: LC10

Batch ID: W4B1814

Preparation: EPA 549.2/SPE

Prepared: 02/22/24 08:48

Analyst: cam

Diquat ND 1.2 4.0 ug/l 1 02/28/24

Endothall By EPA 548.1

Method: EPA 548.1

Instr: GCMS06

Batch ID: W4B1800

Preparation: EPA 548.1/SPE

Prepared: 02/22/24 07:49

Analyst: rmr

Endothall ND 11 45 ug/l 1 02/27/24

Glycols by GC/FID

Method: EPA 8015B

Instr: GC09

Batch ID: W4B1449

Preparation: _NONE (SVOC)

Prepared: 02/20/24 15:24

Analyst: alf

Ethylene glycol ND 4.7 10 mg/l 1 02/20/24

Surrogate(s)

1-Propanol 68% Conc: 68.3 50-150 02/20/24

Glyphosate by EPA 547

Method: EPA 547

Instr: LC11

Batch ID: W4B2068

Preparation: _NONE (LC)

Prepared: 02/26/24 08:52

Analyst: cam

Glyphosate ND 1.8 5.0 ug/l 1 02/27/24

Haloacetic Acids (HAAs) by GC/ECD

Method: EPA 552.3

Instr: GC05

Batch ID: W4B1636

Preparation: EPA 552.3/Micro Ext. Drtz

Prepared: 02/21/24 08:30

Analyst: ecs

Dibromoacetic acid (dbaa) 0.50 0.28 1.0 ug/l 1 03/06/24 J

Dichloroacetic acid (dcaa) 0.60 0.29 1.0 ug/l 1 03/06/24 J

Monobromoacetic acid (mbaa) ND 0.34 1.0 ug/l 1 03/06/24

Monochloroacetic acid (mcaa) ND 0.31 2.0 ug/l 1 03/06/24

Trichloroacetic acid (tcaa) ND 0.29 1.0 ug/l 1 03/06/24

Surrogate(s)

4B16030

Page 7 of 60

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22

Sampled: 02/15/24 11:55 by Earl Garcia

4B16030-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Haloacetic Acids (HAAs) by GC/ECD (Continued)							
Method: EPA 552.3				Instr: GC05			
Batch ID: W4B1636		Preparation: EPA 552.3/Micro Ext. Drtz		Prepared: 02/21/24 08:30		Analyst: ecs	
2-Bromobutyric acid	126%	Conc: 12.6	70-130			03/06/24	
Metals by EPA 200 Series Methods							
Method: EPA 245.1				Instr: HG03			
Batch ID: W4C0568		Preparation: EPA 245.1		Prepared: 03/07/24 14:21		Analyst: KVM	
Mercury, Total	ND	0.037	0.050	ug/l	1	03/12/24	
Perchlorate by EPA 314.0							
Method: EPA 314.0				Instr: LC08_Channel1			
Batch ID: W4B1668		Preparation: _NONE (LC)		Prepared: 02/21/24 10:28		Analyst: CLL	
Perchlorate	ND	0.26	1.0	ug/l	1	02/21/24	
Radiological Parameters by APHA/EPA Methods							
Method: EPA 900.0				Instr: RAD02			
Batch ID: W4C0565		Preparation: _NONE (RADIOCHEM)		Prepared: 03/07/24 12:40		Analyst: ela	
Gross Alpha	1.92			pCi/L	1	03/14/24	
Counting Uncertainty: 0.612	MDA: 0.928						
Gross Beta	2.36			pCi/L	1	03/14/24	
Counting Uncertainty: 0.688	MDA: 1.08						
Semivolatile Organic Compounds by GC/MS							
Method: EPA 525.2				Instr: GCMS16			
Batch ID: W4B2424		Preparation: EPA 525.2/SPE		Prepared: 02/29/24 08:39		Analyst: rmr	
Alachlor	ND	0.063	0.10	ug/l	1	03/09/24	
Atrazine	ND	0.042	0.10	ug/l	1	03/09/24	
Benzo (a) pyrene	ND	0.045	0.10	ug/l	1	03/09/24	
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l	1	03/09/24	
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l	1	03/09/24	
Bromacil	ND	0.24	0.50	ug/l	1	03/09/24	
Butachlor	ND	0.040	0.10	ug/l	1	03/09/24	
Captan	ND	0.32	1.0	ug/l	1	03/09/24	
Chlorpropham	ND	0.040	0.10	ug/l	1	03/09/24	
Diazinon	ND	0.022	0.10	ug/l	1	03/09/24	
Dimethoate	ND	0.041	0.20	ug/l	1	03/09/24	
Diphenamid	ND	0.030	0.10	ug/l	1	03/09/24	
Disulfoton	ND	0.11	0.20	ug/l	1	03/09/24	
EPTC	ND	0.020	0.10	ug/l	1	03/09/24	
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l	1	03/09/24	
Metolachlor	ND	0.030	0.10	ug/l	1	03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22

Sampled: 02/15/24 11:55 by Earl Garcia

4B16030-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Semivolatile Organic Compounds by GC/MS (Continued)							
Method: EPA 525.2			Instr: GCMS16				
Batch ID: W4B2424		Preparation: EPA 525.2/SPE		Prepared: 02/29/24 08:39		Analyst: rmr	
Metribuzin	ND	0.030	0.10	ug/l	1	03/09/24	
Molinate	ND	0.030	0.10	ug/l	1	03/09/24	
Prometryn	ND	0.030	0.10	ug/l	1	03/09/24	
Simazine	ND	0.058	0.10	ug/l	1	03/09/24	
Terbacil	ND	0.090	2.0	ug/l	1	03/09/24	
Thiobencarb	ND	0.069	0.10	ug/l	1	03/09/24	
Trithion	ND	0.054	0.10	ug/l	1	03/09/24	

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	104%	Conc: 5.02	70-130			03/09/24	
Perylene-d12	76%	Conc: 3.70	50-120			03/09/24	
Triphenyl phosphate	73%	Conc: 3.52	70-130			03/09/24	

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 1613B			Instr: GCMS15				
Batch ID: W4C0010		Preparation: EPA 3510C		Prepared: 03/01/24 07:56		Analyst: AJC	
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	1	03/05/24	

Volatile Organics by P&T and GC/MS

Method: EPA 524.3			Instr: GCMS04				
Batch ID: W4B2414		Preparation: Method (P+T)		Prepared: 02/29/24 07:37		Analyst: ADM	
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l	1	02/29/24	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	104%	Conc: 0.415	70-130			02/29/24	
4-Bromofluorobenzene	102%	Conc: 0.409	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22

Sampled: 02/15/24 11:55 by Earl Garcia

4B16030-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0861

Preparation: EPA 533/SPE

Prepared: 03/12/24 08:50

Analyst: ajc

11CI-PF3OUdS	ND	0.89	2.0	ng/l	1	03/14/24	
4:2 FTS	ND	0.83	2.0	ng/l	1	03/14/24	
6:2 FTS	ND	0.78	2.0	ng/l	1	03/14/24	
8:2 FTS	ND	0.68	2.0	ng/l	1	03/14/24	
9CI-PF3ONS	ND	0.84	2.0	ng/l	1	03/14/24	
ADONA	ND	0.71	2.0	ng/l	1	03/14/24	
HFPO-DA	ND	0.92	2.0	ng/l	1	03/14/24	
NFDHA	ND	0.75	2.0	ng/l	1	03/14/24	
PFBA	ND	0.61	2.0	ng/l	1	03/14/24	
PFBS	ND	0.46	2.0	ng/l	1	03/14/24	
PFDA	ND	0.64	2.0	ng/l	1	03/14/24	
PFDoA	ND	0.65	2.0	ng/l	1	03/14/24	
PFEESA	ND	0.45	2.0	ng/l	1	03/14/24	
PFHpA	ND	0.65	2.0	ng/l	1	03/14/24	
PFHpS	ND	0.60	2.0	ng/l	1	03/14/24	
PFHxA	ND	0.72	2.0	ng/l	1	03/14/24	
PFHxS	ND	0.99	2.0	ng/l	1	03/14/24	
PFMBA	ND	0.62	2.0	ng/l	1	03/14/24	
PFMPA	ND	0.42	2.0	ng/l	1	03/14/24	
PFNA	ND	0.88	2.0	ng/l	1	03/14/24	
PFOA	ND	0.92	2.0	ng/l	1	03/14/24	
PFOS	ND	0.68	2.0	ng/l	1	03/14/24	
PFPeA	ND	0.45	2.0	ng/l	1	03/14/24	
PFPeS	ND	0.50	2.0	ng/l	1	03/14/24	
PFUnA	ND	0.59	2.0	ng/l	1	03/14/24	

Surrogate(s)

13C2-4:2 FTS	104%	Conc: 39.2	50-200	03/14/24
13C2-6:2 FTS	103%	Conc: 38.7	50-200	03/14/24
13C2-8:2 FTS	102%	Conc: 38.4	50-200	03/14/24
13C2-PFDoA	100%	Conc: 9.38	50-200	03/14/24
13C3-PFBS	116%	Conc: 10.9	50-200	03/14/24
13C3-PFHxS	117%	Conc: 11.0	50-200	03/14/24
13C4-PFBA	96%	Conc: 9.05	50-200	03/14/24
13C4-PFHpA	91%	Conc: 8.51	50-200	03/14/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22

Sampled: 02/15/24 11:55 by Earl Garcia

4B16030-01RE1 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0861		Preparation: EPA 533/SPE		Prepared: 03/12/24 08:50		Analyst: ajc	
13C5-PFHxA	92%	Conc: 8.67	50-200			03/14/24	
13C5-PFPeA	100%	Conc: 9.43	50-200			03/14/24	
13C6-PFDA	95%	Conc: 8.89	50-200			03/14/24	
13C7-PFUnA	97%	Conc: 9.08	50-200			03/14/24	
13C8-PFOA	91%	Conc: 8.58	50-200			03/14/24	
13C8-PFOS	118%	Conc: 11.1	50-200			03/14/24	
13C9-PFNA	90%	Conc: 8.46	50-200			03/14/24	
HFPO-DA-13C3	89%	Conc: 8.36	50-200			03/14/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/15/24 14:50 by Earl Garcia

4B16030-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Aldehydes and Carbonyl Compounds by GC/ECD							
Method: EPA 556				Instr: GC08			
Batch ID: W4B1809		Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08	
Formaldehyde	9.1	0.86	2.0	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
2,4,5-TFAP	86%	Conc: 17.9	70-130			03/01/24	

Carbamates and Urea Pesticides

Method: EPA 531.2				Instr: LC11			
Batch ID: W4B2044		Preparation: _NONE (LC)		Prepared: 02/25/24 10:29		Analyst: cam	
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l	1	02/25/24	
Aldicarb	ND	0.58	2.0	ug/l	1	02/25/24	
Aldicarb sulfone	ND	0.73	2.0	ug/l	1	02/25/24	
Aldicarb sulfoxide	ND	1.0	2.0	ug/l	1	02/25/24	
Carbaryl	ND	1.0	2.0	ug/l	1	02/25/24	
Carbofuran	ND	1.0	2.0	ug/l	1	02/25/24	
Methiocarb	ND	1.0	2.0	ug/l	1	02/25/24	
Methomyl	ND	1.3	2.0	ug/l	1	02/25/24	
Oxamyl	ND	1.1	2.0	ug/l	1	02/25/24	
Propoxur (Baygon)	ND	1.4	2.0	ug/l	1	02/25/24	
<i>Surrogate(s)</i>							
BDMC	110%	Conc: 11.0	70-130			02/25/24	

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.4				Instr: GC08			
Batch ID: W4B2149		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/27/24 08:15		Analyst: alf	
2,4,5-T	ND	0.065	0.20	ug/l	1	03/12/24	
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l	1	03/12/24	
2,4-D	ND	0.14	0.40	ug/l	1	03/12/24	
2,4-DB	ND	0.19	2.0	ug/l	1	03/12/24	
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l	1	03/12/24	
Acifluorfen	ND	0.030	0.40	ug/l	1	03/12/24	
Bentazon	ND	0.23	2.0	ug/l	1	03/12/24	
Dalapon	ND	0.11	0.40	ug/l	1	03/12/24	
DCPA	ND	0.029	0.10	ug/l	1	03/12/24	
Dicamba	ND	0.15	0.60	ug/l	1	03/12/24	
Dichloroprop	ND	0.12	0.30	ug/l	1	03/12/24	
Dinoseb	ND	0.033	0.40	ug/l	1	03/12/24	
Pentachlorophenol	ND	0.014	0.20	ug/l	1	03/12/24	
Picloram	ND	0.050	0.60	ug/l	1	03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/15/24 14:50 by Earl Garcia

4B16030-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Acids Herbicides by GC/ECD (Continued)							
Method: EPA 515.4				Instr: GC08			
Batch ID: W4B2149		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/27/24 08:15		Analyst: alf	
<i>Surrogate(s)</i>							
2,4-DCAA	104%	Conc: 10.4	70-130			03/12/24	

Chlorinated Pesticides and/or PCBs by GC/ECD

Method: EPA 508.1				Instr: GC08			
Batch ID: W4B2423		Preparation: EPA 508.1/SPE		Prepared: 02/29/24 08:34		Analyst: alf	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	03/06/24	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
4,4'-DDT	ND	0.0030	0.010	ug/l	1	03/06/24	
Aldrin	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
alpha-BHC	ND	0.0015	0.010	ug/l	1	03/06/24	
Aroclor 1016	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1221	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1232	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1242	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1248	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1254	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1260	ND	0.10	0.10	ug/l	1	03/06/24	Q-02
beta-BHC	ND	0.010	0.010	ug/l	1	03/06/24	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	03/06/24	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	03/06/24	
delta-BHC	ND	0.0030	0.010	ug/l	1	03/06/24	
Dieldrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endosulfan I	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endosulfan II	ND	0.0019	0.010	ug/l	1	03/06/24	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	03/06/24	
Heptachlor	ND	0.010	0.010	ug/l	1	03/06/24	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	03/06/24	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	03/06/24	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	03/06/24	
Methoxychlor	ND	0.0030	0.010	ug/l	1	03/06/24	
PCBs, Total	ND	0.10	0.50	ug/l	1	03/06/24	
Propachlor	ND	0.045	0.20	ug/l	1	03/06/24	

4B16030

Page 13 of 60

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/15/24 14:50 by Earl Garcia

4B16030-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1		Instr: GC08					
Batch ID: W4B2423	Preparation: EPA 508.1/SPE	Prepared: 02/29/24 08:34	Analyst: alf				
Toxaphene	ND	0.37	1.0	ug/l	1	03/06/24	
Trifluralin	ND	0.0043	0.010	ug/l	1	03/06/24	
<i>Surrogate(s)</i>							
4,4-Dibromobiphenyl	121%	Conc: 0.118	70-130	03/06/24			

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 335.4		Instr: AA01					
Batch ID: W4B2161	Preparation: _NONE (WETCHEM)	Prepared: 02/27/24 09:33	Analyst: kac				
Cyanide, Total	22	5.0	5.0	ug/l	1	02/28/24	

Diquat and Paraquat by EPA 549.2

Method: EPA 549.2		Instr: LC10					
Batch ID: W4B1814	Preparation: EPA 549.2/SPE	Prepared: 02/22/24 08:48	Analyst: cam				
Diquat	ND	1.2	4.0	ug/l	1	02/28/24	

Endothall By EPA 548.1

Method: EPA 548.1		Instr: GCMS06					
Batch ID: W4B1800	Preparation: EPA 548.1/SPE	Prepared: 02/22/24 07:49	Analyst: rmr				
Endothall	ND	11	45	ug/l	1	02/27/24	

Glycols by GC/FID

Method: EPA 8015B		Instr: GC09					
Batch ID: W4B1449	Preparation: _NONE (SVOC)	Prepared: 02/20/24 15:24	Analyst: alf				
Ethylene glycol	ND	4.7	10	mg/l	1	02/20/24	
<i>Surrogate(s)</i>							
1-Propanol	89%	Conc: 88.6	50-150	02/20/24			

Glyphosate by EPA 547

Method: EPA 547		Instr: LC11					
Batch ID: W4B2068	Preparation: _NONE (LC)	Prepared: 02/26/24 08:52	Analyst: cam				
Glyphosate	ND	1.8	5.0	ug/l	1	02/27/24	

Haloacetic Acids (HAAs) by GC/ECD

Method: EPA 552.3		Instr: GC05					
Batch ID: W4B1636	Preparation: EPA 552.3/Micro Ext. Drtz	Prepared: 02/21/24 08:30	Analyst: ecs				
Dibromoacetic acid (dbaa)	0.58	0.28	1.0	ug/l	1	03/06/24	J
Dichloroacetic acid (dcaa)	0.51	0.29	1.0	ug/l	1	03/06/24	J
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l	1	03/06/24	
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l	1	03/06/24	
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l	1	03/06/24	

Surrogate(s)

4B16030

Page 14 of 60

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/15/24 14:50 by Earl Garcia

4B16030-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Haloacetic Acids (HAAs) by GC/ECD (Continued)

Method: EPA 552.3			Instr: GC05				
Batch ID: W4B1636	Preparation: EPA 552.3/Micro Ext. Drtz		Prepared: 02/21/24 08:30	Analyst: ecs			
2-Bromobutyric acid	114%	Conc: 11.4	70-130			03/06/24	

Metals by EPA 200 Series Methods

Method: EPA 245.1			Instr: HG03				
Batch ID: W4C0568	Preparation: EPA 245.1		Prepared: 03/07/24 14:21	Analyst: KVM			
Mercury, Total	ND	0.037	0.050	ug/l	1	03/12/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0509	Preparation: EPA 533/SPE		Prepared: 03/07/24 09:21	Analyst: ajc			
11CI-PF3OUdS	ND	0.81	1.8	ng/l	1	03/10/24	
4:2 FTS	ND	0.76	1.8	ng/l	1	03/10/24	
6:2 FTS	ND	0.71	1.8	ng/l	1	03/10/24	
8:2 FTS	ND	0.61	1.8	ng/l	1	03/10/24	
9CI-PF3ONS	ND	0.77	1.8	ng/l	1	03/10/24	
ADONA	ND	0.65	1.8	ng/l	1	03/10/24	
HFPO-DA	ND	0.84	1.8	ng/l	1	03/10/24	
NFDHA	ND	0.68	1.8	ng/l	1	03/10/24	
PFBA	ND	0.55	1.8	ng/l	1	03/10/24	
PFBS	ND	0.42	1.8	ng/l	1	03/10/24	
PFDA	ND	0.59	1.8	ng/l	1	03/10/24	
PFDoA	ND	0.59	1.8	ng/l	1	03/10/24	
PFEESA	ND	0.41	1.8	ng/l	1	03/10/24	
PFHpA	ND	0.59	1.8	ng/l	1	03/10/24	
PFHpS	ND	0.55	1.8	ng/l	1	03/10/24	
PFHxA	ND	0.65	1.8	ng/l	1	03/10/24	
PFHxS	ND	0.90	1.8	ng/l	1	03/10/24	
PFMBA	ND	0.56	1.8	ng/l	1	03/10/24	
PFMPA	ND	0.38	1.8	ng/l	1	03/10/24	
PFNA	ND	0.80	1.8	ng/l	1	03/10/24	
PFOA	ND	0.84	1.8	ng/l	1	03/10/24	
PFOS	ND	0.62	1.8	ng/l	1	03/10/24	
PFPeA	ND	0.41	1.8	ng/l	1	03/10/24	
PFPeS	ND	0.45	1.8	ng/l	1	03/10/24	
PFOUnA	ND	0.54	1.8	ng/l	1	03/10/24	

Surrogate(s)

13C2-4:2 FTS	97%	Conc: 35.2	50-200			03/10/24	
--------------	-----	------------	--------	--	--	----------	--

4B16030

Page 15 of 60

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/15/24 14:50 by Earl Garcia

4B16030-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0509		Preparation: EPA 533/SPE		Prepared: 03/07/24 09:21		Analyst: ajc	
13C2-6:2 FTS	99%	Conc: 36.0	50-200			03/10/24	
13C2-8:2 FTS	96%	Conc: 34.8	50-200			03/10/24	
13C2-PFDoA	100%	Conc: 9.09	50-200			03/10/24	
13C3-PFBS	105%	Conc: 9.56	50-200			03/10/24	
13C3-PFHxS	105%	Conc: 9.56	50-200			03/10/24	
13C4-PFBA	108%	Conc: 9.85	50-200			03/10/24	
13C4-PFHpA	99%	Conc: 8.97	50-200			03/10/24	
13C5-PFHxA	103%	Conc: 9.35	50-200			03/10/24	
13C5-PFPeA	109%	Conc: 9.87	50-200			03/10/24	
13C6-PFDA	101%	Conc: 9.21	50-200			03/10/24	
13C7-PFUnA	96%	Conc: 8.75	50-200			03/10/24	
13C8-PFOA	98%	Conc: 8.95	50-200			03/10/24	
13C8-PFOS	111%	Conc: 10.0	50-200			03/10/24	
13C9-PFNA	99%	Conc: 8.98	50-200			03/10/24	
HFPO-DA-13C3	99%	Conc: 8.99	50-200			03/10/24	

Perchlorate by EPA 314.0

Method: EPA 314.0			Instr: LC08_Channel1				
Batch ID: W4B1668		Preparation: _NONE (LC)		Prepared: 02/21/24 10:28		Analyst: CLL	
Perchlorate	ND	0.26	1.0	ug/l	1	02/21/24	

Radiological Parameters by APHA/EPA Methods

Method: EPA 900.0			Instr: RAD02				
Batch ID: W4C0565		Preparation: _NONE (RADIOCHEM)		Prepared: 03/07/24 12:40		Analyst: ela	
Gross Alpha	1.84			pCi/L	1	03/14/24	
Counting Uncertainty: 0.536		MDA: 0.782					
Gross Beta	2.01			pCi/L	1	03/14/24	
Counting Uncertainty: 0.788		MDA: 1.278					

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2			Instr: GCMS16				
Batch ID: W4B2424		Preparation: EPA 525.2/SPE		Prepared: 02/29/24 08:39		Analyst: rmr	
Alachlor	ND	0.063	0.10	ug/l	1	03/09/24	
Atrazine	ND	0.042	0.10	ug/l	1	03/09/24	
Benzo (a) pyrene	ND	0.045	0.10	ug/l	1	03/09/24	
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l	1	03/09/24	
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l	1	03/09/24	
Bromacil	ND	0.24	0.50	ug/l	1	03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/15/24 14:50 by Earl Garcia

4B16030-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Semivolatile Organic Compounds by GC/MS (Continued)

Method: EPA 525.2

Instr: GCMS16

Batch ID: W4B2424

Preparation: EPA 525.2/SPE

Prepared: 02/29/24 08:39

Analyst: rmr

Butachlor	ND	0.040	0.10	ug/l	1	03/09/24	
Captan	ND	0.32	1.0	ug/l	1	03/09/24	
Chlorpropham	ND	0.040	0.10	ug/l	1	03/09/24	
Diazinon	ND	0.022	0.10	ug/l	1	03/09/24	
Dimethoate	ND	0.041	0.20	ug/l	1	03/09/24	
Diphenamid	ND	0.030	0.10	ug/l	1	03/09/24	
Disulfoton	ND	0.11	0.20	ug/l	1	03/09/24	
EPTC	ND	0.020	0.10	ug/l	1	03/09/24	
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l	1	03/09/24	
Metolachlor	ND	0.030	0.10	ug/l	1	03/09/24	
Metribuzin	ND	0.030	0.10	ug/l	1	03/09/24	
Molinate	ND	0.030	0.10	ug/l	1	03/09/24	
Prometryn	ND	0.030	0.10	ug/l	1	03/09/24	
Simazine	ND	0.058	0.10	ug/l	1	03/09/24	
Terbacil	ND	0.090	2.0	ug/l	1	03/09/24	
Thiobencarb	ND	0.069	0.10	ug/l	1	03/09/24	
Trithion	ND	0.054	0.10	ug/l	1	03/09/24	

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	105%	Conc: 5.02	70-130			03/09/24	
Perylene-d12	79%	Conc: 3.80	50-120			03/09/24	
Triphenyl phosphate	82%	Conc: 3.95	70-130			03/09/24	

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 1613B

Instr: GCMS15

Batch ID: W4C0010

Preparation: EPA 3510C

Prepared: 03/01/24 07:56

Analyst: AJC

2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	1	03/05/24	
-----------------------	----	------	------	------	---	----------	--

Volatile Organics by P&T and GC/MS

Method: EPA 524.3

Instr: GCMS04

Batch ID: W4B2414

Preparation: Method (P+T)

Prepared: 02/29/24 07:37

Analyst: ADM

1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l	1	02/29/24	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	106%	Conc: 0.425	70-130			02/29/24	
4-Bromofluorobenzene	102%	Conc: 0.410	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22 Trip Blank

Sampled: 02/15/24 0:00 by Earl Garcia

4B16030-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22 Trip Blank

Sampled: 02/15/24 0:00 by Earl Garcia

4B16030-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	ND		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW
 Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-4-S22 Trip Blank

Sampled: 02/15/24 0:00 by Earl Garcia

4B16030-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM	
1,2-Dichlorobenzene-d4	84%	Conc: 41.8	70-130			02/29/24	
4-Bromofluorobenzene	82%	Conc: 41.1	70-130			02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22 Trip Blank

Sampled: 02/15/24 0:00 by Earl Garcia

4B16030-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22 Trip Blank

Sampled: 02/15/24 0:00 by Earl Garcia

4B16030-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W4B2361		Preparation: EPA 5030B			Prepared: 02/28/24 11:45		Analyst: ADM
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	ND		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW
 Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Sample Results

(Continued)

Sample: AT-RES-3-S22 Trip Blank

Sampled: 02/15/24 0:00 by Earl Garcia

4B16030-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS08				
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM	
1,2-Dichlorobenzene-d4	77%	Conc: 38.7	70-130			02/29/24	
4-Bromofluorobenzene	78%	Conc: 38.8	70-130			02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Sample Results GEL Laboratories, LLC

Sample: AT-RES-4-S22
 4B16030-01 (Water)

Sampled: 02/15/24 11:55 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
EPA 903.1							
Method: EPA 903.1	Batch ID: 2574114		Prepared: 03/11/24 00:00				Analyst: MJ2
Radium-226	-0.0323			pCi/L	1	03/11/24	U
Uncertainty: 0.0896	MDA: 0.281						
EPA 904.0/ EPA 9320							
Method: EPA 904.0/ EPA 9320	Batch ID: 2574893		Prepared: 03/15/24 00:00				Analyst: JE1
Radium-228	-1.10			pCi/L	1	03/15/24	U
Uncertainty: 0.220	MDA: 0.620						
<i>Surrogate(s)</i>							
<i>Barium Carrier</i>	102%		25-125			03/15/24	
<i>Yttrium Carrier</i>	78.8%		25-125			03/15/24	
EPA 905.0							
Method: EPA 905.0	Batch ID: 2571964		Prepared: 02/28/24 00:00				Analyst: ST2
Strontium-90	0.385			pCi/L	1	02/28/24	U
Uncertainty: 0.645	MDA: 1.12						
<i>Surrogate(s)</i>							
<i>Strontium Carrier</i>	88.2%		25-125			02/28/24	
EPA 906.0							
Method: EPA 906.0	Batch ID: 2573168		Prepared: 03/07/24 00:00				Analyst: HB2
Tritium	-11.9			pCi/L	1	03/07/24	U
Uncertainty: 341	MDA: 601						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Sample Results GEL Laboratories, LLC (Continued)

Sample: AT-RES-3-S22 4B16030-02 (Water) Sampled: 02/15/24 14:50 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 903.1							
Method: EPA 903.1	Batch ID: 2574114	Prepared: 03/11/24 00:00		Analyst: MJ2			
Radium-226	0.265			pCi/L	1	03/11/24	
Uncertainty: 0.200	MDA: 0.256						

EPA 904.0/ EPA 9320							
Method: EPA 904.0/ EPA 9320	Batch ID: 2572385	Prepared: 03/04/24 00:00		Analyst: JE1			
Radium-228	-0.161			pCi/L	1	03/04/24	U
Uncertainty: 0.463	MDA: 0.867						
<i>Surrogate(s)</i>							
Barium Carrier	97.9%		25-125			03/04/24	
Yttrium Carrier	76.9%		25-125			03/04/24	

EPA 905.0							
Method: EPA 905.0	Batch ID: 2571964	Prepared: 02/27/24 00:00		Analyst: ST2			
Strontium-90	0.285			pCi/L	1	02/27/24	U
Uncertainty: 0.911	MDA: 1.63						
<i>Surrogate(s)</i>							
Strontium Carrier	89.3%		25-125			02/27/24	

EPA 906.0							
Method: EPA 906.0	Batch ID: 2573168	Prepared: 03/07/24 00:00		Analyst: HB2			
Tritium	329			pCi/L	1	03/07/24	U
Uncertainty: 369	MDA: 619						

Sample Results LA Testing - EMSL Analytical, Inc. CA-ELAP #2283, Non-NELAP (Continued)

Sample: AT-RES-4-S22 4B16030-01 (Water) Sampled: 02/15/24 11:55 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 100.2							
Method: EPA 100.2	Batch ID: 322404162	Prepared: 02/21/24 12:30		Analyst: _SUB			
Asbestos	ND		0.20	MFL	1	02/26/24	
Fibers:	Area: 0.064	Confidence: 0.00-0.74					

Sample: AT-RES-3-S22 4B16030-02 (Water) Sampled: 02/15/24 14:50 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 100.2							
Method: EPA 100.2	Batch ID: 322404162	Prepared: 02/21/24 12:30		Analyst: _SUB			
Asbestos	ND		0.20	MFL	1	02/26/24	
Fibers:	Area: 0.064	Confidence: 0.00-0.74					

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

EPA 903.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2574114 - EPA 903.1										
Blank (1205661210-BLK)										
Radium-226	0.0420	1.00	pCi/L			-				U
Uncertainty: 0.0823	MDA: 0.164									
Duplicate (1205661211 D)										
Radium-226	0.0485	1.00	pCi/L		<	0-20	0	20		U
Uncertainty: 0.123	MDA: 0.256									
Matrix Spike (1205661212 S)										
Radium-226	24.7	1.00	pCi/L	30.4	<	81.1	80-120			
Uncertainty: 2.43	MDA: 0.437									
BS (1205661213-BKS)										
Radium-226	14.7	1.00	pCi/L	13.5		110	90-110			
Uncertainty: 1.57	MDA: 0.253									

Quality Control Results

EPA 904.0/ EPA 9320

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2572385 - EPA 904.0/ EPA 9320										
Blank (1205657759-BLK)										
Radium-228	0.312	1.00	pCi/L			-				U
Uncertainty: 0.381	MDA: 0.644									
Duplicate (1205657760 D)										
Radium-228	0.112	1.00	pCi/L		<	0-20	0	20		U
Uncertainty: 0.392	MDA: 0.709									
Matrix Spike (1205657761 S)										
Radium-228	12.7	1.00	pCi/L	16.8	<	75.9	70-130			
Uncertainty: 1.16	MDA: 0.535									
BS (1205657762-BKS)										
Radium-228	2.78	1.00	pCi/L	3.36		82.9	80-120			
Uncertainty: 0.579	MDA: 0.533									
Batch: 2574893 - EPA 904.0/ EPA 9320										
Blank (1205662656-BLK)										
Radium-228	0.421	1.00	pCi/L			-				U
Uncertainty: 0.287	MDA: 0.449									
Duplicate (1205662657 D)										
Radium-228	-0.118	1.00	pCi/L		<	0-20	0	20		U
Uncertainty: 0.222	MDA: 0.453									
Matrix Spike (1205662658 S)										
Radium-228	13.8	1.00	pCi/L	17.0	<	81.1	70-130			
Uncertainty: 1.14	MDA: 0.635									
BS (1205662659-BKS)										
Radium-228	2.91	1.00	pCi/L	3.39		85.9	80-120			

4B16030

Page 26 of 60

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

EPA 904.0/ EPA 9320 (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2574893 - EPA 904.0/ EPA 9320 (Continued)										
BS (1205662659-BKS)										
Prepared & Analyzed: 03/15/24										
Uncertainty: 0.503 MDA: 0.457										

Quality Control Results

(Continued)

EPA 905.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2571964 - EPA 905.0										
Blank (1205656780-BLK)										
Prepared & Analyzed: 02/27/24										
Strontium-90	0.510	2.00	pCi/L				-			U
Uncertainty: 0.966 MDA: 1.68										
Duplicate (1205656781 D)										
Prepared & Analyzed: 02/27/24										
Strontium-90	0.0138	2.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.832 MDA: 1.55										
Matrix Spike (1205656782 S)										
Prepared & Analyzed: 02/28/24										
Strontium-90	32.6	2.00	pCi/L	28.2	<	116	80-120			
Uncertainty: 2.93 MDA: 1.77										
BS (1205656783-BKS)										
Prepared & Analyzed: 02/27/24										
Strontium-90	6.08	2.00	pCi/L	5.60		109	90-110			
Uncertainty: 1.57 MDA: 1.79										

Quality Control Results

(Continued)

EPA 906.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573168 - EPA 906.0										
Blank (1205659461-BLK)										
Prepared & Analyzed: 03/07/24										
Tritium	33.7	1000	pCi/L				-			U
Uncertainty: 355 MDA: 620										
Duplicate (1205659462 D)										
Prepared & Analyzed: 03/07/24										
Tritium	33.2	1000	pCi/L		<		0-20	0	20	U
Uncertainty: 356 MDA: 623										
Matrix Spike (1205659463 S)										
Prepared & Analyzed: 03/07/24										
Tritium	10500	1000	pCi/L	12000	<	87.8	80-120			
Uncertainty: 1310 MDA: 1540										
BS (1205659464-BKS)										
Prepared & Analyzed: 03/11/24										
Tritium	4850	1000	pCi/L	4830		100	90-110			
Uncertainty: 623 MDA: 702										

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW
 Standards

Reported:
 04/04/2024 08:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Aldehydes and Carbonyl Compounds by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1809 - EPA 556											
Blank (W4B1809-BLK1)											
Formaldehyde	ND	0.86	2.0	ug/l							
<i>Surrogate(s)</i>											
2,4,5-TFAP	21.5			ug/l	20.0		108	70-130			
LCS (W4B1809-BS1)											
Formaldehyde	15.0	0.86	2.0	ug/l	20.0		75	70-130			
<i>Surrogate(s)</i>											
2,4,5-TFAP	23.3			ug/l	20.0		117	70-130			
LCS Dup (W4B1809-BSD1)											
Formaldehyde	15.7	0.86	2.0	ug/l	20.0		78	70-130	4	30	
<i>Surrogate(s)</i>											
2,4,5-TFAP	21.6			ug/l	20.0		108	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2										
Blank (W4B2044-BLK1)					Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l						
Aldicarb	ND	0.58	2.0	ug/l						
Aldicarb sulfone	ND	0.73	2.0	ug/l						
Aldicarb sulfoxide	ND	1.0	2.0	ug/l						
Carbaryl	ND	1.0	2.0	ug/l						
Carbofuran	ND	1.0	2.0	ug/l						
Methiocarb	ND	1.0	2.0	ug/l						
Methomyl	ND	1.3	2.0	ug/l						
Oxamyl	ND	1.1	2.0	ug/l						
Propoxur (Baygon)	ND	1.4	2.0	ug/l						
<i>Surrogate(s)</i>										
BDMC	10.6			ug/l	10.0		106 70-130			
LCS (W4B2044-BS1)					Prepared: 02/25/24 Analyzed: 02/26/24					
3-Hydroxycarbofuran	11.0	0.82	2.0	ug/l	10.0		110 70-130			
Aldicarb	10.8	0.58	2.0	ug/l	10.0		108 70-130			
Aldicarb sulfone	8.12	0.73	2.0	ug/l	10.0		81 70-130			
Aldicarb sulfoxide	11.3	1.0	2.0	ug/l	10.0		113 70-130			
Carbaryl	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Carbofuran	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Methiocarb	12.6	1.0	2.0	ug/l	10.0		126 70-130			
Methomyl	9.30	1.3	2.0	ug/l	10.0		93 70-130			
Oxamyl	8.16	1.1	2.0	ug/l	10.0		82 70-130			
Propoxur (Baygon)	11.6	1.4	2.0	ug/l	10.0		116 70-130			
<i>Surrogate(s)</i>										
BDMC	12.6			ug/l	10.0		126 70-130			
Matrix Spike (W4B2044-MS1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.5	0.82	2.0	ug/l	10.0	ND	125 70-130			
Aldicarb	12.9	0.58	2.0	ug/l	10.0	ND	129 70-130			
Aldicarb sulfone	9.57	0.73	2.0	ug/l	10.0	ND	96 70-130			
Aldicarb sulfoxide	12.2	1.0	2.0	ug/l	10.0	ND	122 70-130			
Carbaryl	12.4	1.0	2.0	ug/l	10.0	ND	124 70-130			
Carbofuran	11.0	1.0	2.0	ug/l	10.0	ND	110 70-130			
Methiocarb	13.0	1.0	2.0	ug/l	10.0	ND	130 70-130			
Methomyl	10.8	1.3	2.0	ug/l	10.0	ND	108 70-130			
Oxamyl	10.8	1.1	2.0	ug/l	10.0	ND	108 70-130			
Propoxur (Baygon)	12.1	1.4	2.0	ug/l	10.0	ND	121 70-130			
<i>Surrogate(s)</i>										
BDMC	11.8			ug/l	10.0		118 70-130			
Matrix Spike Dup (W4B2044-MSD1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.1	0.82	2.0	ug/l	10.0	ND	121 70-130	3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results (Continued)

Carbamates and Urea Pesticides (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2 (Continued)											
Matrix Spike Dup (W4B2044-MSD1)			Source: 3L04005-04			Prepared & Analyzed: 02/25/24					
Aldicarb	11.8	0.58	2.0	ug/l	10.0	ND	118	70-130	9	30	
Aldicarb sulfone	9.24	0.73	2.0	ug/l	10.0	ND	92	70-130	4	30	
Aldicarb sulfoxide	14.0	1.0	2.0	ug/l	10.0	ND	140	70-130	13	30	MS-01
Carbaryl	11.4	1.0	2.0	ug/l	10.0	ND	114	70-130	8	30	
Carbofuran	11.6	1.0	2.0	ug/l	10.0	ND	116	70-130	5	30	
Methiocarb	12.3	1.0	2.0	ug/l	10.0	ND	123	70-130	5	30	
Methomyl	10.7	1.3	2.0	ug/l	10.0	ND	107	70-130	1	30	
Oxamyl	10.6	1.1	2.0	ug/l	10.0	ND	106	70-130	2	30	
Propoxur (Baygon)	12.2	1.4	2.0	ug/l	10.0	ND	122	70-130	1	30	
<i>Surrogate(s)</i>											
BDMC	12.7			ug/l	10.0		127	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2149 - EPA 515.4											
Blank (W4B2149-BLK1)						Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	ND	0.065	0.20	ug/l							
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l							
2,4-D	ND	0.14	0.40	ug/l							
2,4-DB	0.233	0.19	2.0	ug/l							B-02, J
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l							
Acifluorfen	ND	0.030	0.40	ug/l							
Bentazon	ND	0.23	2.0	ug/l							
Dalapon	ND	0.11	0.40	ug/l							
DCPA	0.0458	0.029	0.10	ug/l							B-02, J
Dicamba	ND	0.15	0.60	ug/l							
Dichloroprop	ND	0.12	0.30	ug/l							
Dinoseb	ND	0.033	0.40	ug/l							
Pentachlorophenol	ND	0.014	0.20	ug/l							
Picloram	ND	0.050	0.60	ug/l							
<i>Surrogate(s)</i>											
2,4-DCAA	9.53			ug/l	10.0		95	70-130			
LCS (W4B2149-BS1)						Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	4.22	0.065	0.20	ug/l	4.00		106	70-130			
2,4,5-TP (Silvex)	4.19	0.026	0.20	ug/l	4.00		105	70-130			
2,4-D	8.44	0.14	0.40	ug/l	8.00		106	70-130			
2,4-DB	15.8	0.19	2.0	ug/l	16.0		99	70-130			
3,5-Dichlorobenzoic acid	8.45	0.12	1.0	ug/l	8.00		106	70-130			
Acifluorfen	4.15	0.030	0.40	ug/l	4.00		104	70-130			
Bentazon	16.2	0.23	2.0	ug/l	16.0		101	70-130			
Dalapon	8.26	0.11	0.40	ug/l	8.00		103	70-130			
DCPA	4.74	0.029	0.10	ug/l	4.00		119	70-130			
Dicamba	8.32	0.15	0.60	ug/l	8.00		104	70-130			
Dichloroprop	8.44	0.12	0.30	ug/l	8.00		105	70-130			
Dinoseb	4.25	0.033	0.40	ug/l	4.00		106	70-130			
Pentachlorophenol	4.24	0.014	0.20	ug/l	4.00		106	70-130			
Picloram	4.17	0.050	0.60	ug/l	4.00		104	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.5			ug/l	10.0		105	70-130			
Matrix Spike (W4B2149-MS1)			Source: 4B15126-01			Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	4.30	0.065	0.20	ug/l	4.00	ND	108	70-130			
2,4,5-TP (Silvex)	4.15	0.026	0.20	ug/l	4.00	ND	104	70-130			
2,4-D	8.41	0.14	0.40	ug/l	8.00	ND	105	70-130			
2,4-DB	16.5	0.19	2.0	ug/l	16.0	ND	103	70-130			
3,5-Dichlorobenzoic acid	8.22	0.12	1.0	ug/l	8.00	ND	103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results (Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2149 - EPA 515.4 (Continued)											
Matrix Spike (W4B2149-MS1)			Source: 4B15126-01			Prepared: 02/27/24			Analyzed: 03/12/24		
Acifluorfen	4.22	0.030	0.40	ug/l	4.00	ND	105	70-130			
Bentazon	16.9	0.23	2.0	ug/l	16.0	ND	105	70-130			
Dalapon	8.38	0.11	0.40	ug/l	8.00	ND	105	70-130			
DCPA	5.25	0.029	0.10	ug/l	4.00	ND	131	70-130			MS-01
Dicamba	8.25	0.15	0.60	ug/l	8.00	ND	103	70-130			
Dichloroprop	8.27	0.12	0.30	ug/l	8.00	ND	103	70-130			
Dinoseb	4.18	0.033	0.40	ug/l	4.00	ND	105	70-130			
Pentachlorophenol	4.17	0.014	0.20	ug/l	4.00	ND	104	70-130			
Picloram	4.33	0.050	0.60	ug/l	4.00	ND	108	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.3			ug/l	10.0		103	70-130			
Matrix Spike Dup (W4B2149-MSD1)			Source: 4B15126-01			Prepared: 02/27/24			Analyzed: 03/12/24		
2,4,5-T	4.24	0.065	0.20	ug/l	4.00	ND	106	70-130	1	30	
2,4,5-TP (Silvex)	4.24	0.026	0.20	ug/l	4.00	ND	106	70-130	2	30	
2,4-D	8.48	0.14	0.40	ug/l	8.00	ND	106	70-130	0.8	30	
2,4-DB	15.8	0.19	2.0	ug/l	16.0	ND	98	70-130	5	30	
3,5-Dichlorobenzoic acid	8.47	0.12	1.0	ug/l	8.00	ND	106	70-130	3	30	
Acifluorfen	4.21	0.030	0.40	ug/l	4.00	ND	105	70-130	0.2	30	
Bentazon	16.6	0.23	2.0	ug/l	16.0	ND	103	70-130	2	30	
Dalapon	8.27	0.11	0.40	ug/l	8.00	ND	103	70-130	1	30	
DCPA	5.35	0.029	0.10	ug/l	4.00	ND	134	70-130	2	30	MS-01
Dicamba	8.44	0.15	0.60	ug/l	8.00	ND	105	70-130	2	30	
Dichloroprop	8.44	0.12	0.30	ug/l	8.00	ND	105	70-130	2	30	
Dinoseb	4.20	0.033	0.40	ug/l	4.00	ND	105	70-130	0.5	30	
Pentachlorophenol	4.26	0.014	0.20	ug/l	4.00	ND	107	70-130	2	30	
Picloram	4.23	0.050	0.60	ug/l	4.00	ND	106	70-130	2	30	
<i>Surrogate(s)</i>											
2,4-DCAA	10.6			ug/l	10.0		106	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1										
Blank (W4B2423-BLK1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	ND	0.0030	0.010	ug/l						
4,4'-DDE	ND	0.0040	0.010	ug/l						
4,4'-DDT	ND	0.0030	0.010	ug/l						
Aldrin	ND	0.0040	0.010	ug/l						
alpha-BHC	ND	0.0015	0.010	ug/l						
Aroclor 1016	ND	0.048	0.10	ug/l						
Aroclor 1221	ND	0.044	0.10	ug/l						
Aroclor 1232	ND	0.064	0.10	ug/l						
Aroclor 1242	ND	0.070	0.10	ug/l						
Aroclor 1248	ND	0.049	0.10	ug/l						
Aroclor 1254	ND	0.068	0.10	ug/l						
Aroclor 1260	ND	0.076	0.10	ug/l						
beta-BHC	ND	0.0045	0.010	ug/l						
Chlordane (tech)	ND	0.067	0.10	ug/l						
Chlorothalonil	ND	0.0040	0.050	ug/l						
delta-BHC	ND	0.0030	0.010	ug/l						
Dieldrin	ND	0.0030	0.010	ug/l						
Endosulfan I	ND	0.0030	0.010	ug/l						
Endosulfan II	ND	0.0019	0.010	ug/l						
Endosulfan sulfate	ND	0.0030	0.010	ug/l						
Endrin	ND	0.0030	0.010	ug/l						
Endrin aldehyde	ND	0.0040	0.010	ug/l						
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l						
Heptachlor	ND	0.0031	0.010	ug/l						
Heptachlor epoxide	ND	0.0019	0.010	ug/l						
Hexachlorobenzene	ND	0.0019	0.050	ug/l						
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l						
Methoxychlor	ND	0.0030	0.010	ug/l						
PCBs, Total	ND	0.048	0.50	ug/l						
Propachlor	ND	0.045	0.20	ug/l						
Toxaphene	ND	0.37	1.0	ug/l						
Trifluralin	ND	0.0043	0.010	ug/l						
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0981			ug/l	0.100		98	70-130		
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	0.0759	0.0030	0.010	ug/l	0.100		76	70-130		
4,4'-DDE	0.0595	0.0040	0.010	ug/l	0.100		60	70-130		Q-02
4,4'-DDT	0.112	0.0030	0.010	ug/l	0.100		112	70-130		
Aldrin	0.0182	0.0040	0.010	ug/l	0.100		18	50-130		Q-02

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1 (Continued)										
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
alpha-BHC	0.0815	0.0015	0.010	ug/l	0.100		82 70-130			
beta-BHC	0.0856	0.0045	0.010	ug/l	0.100		86 70-130			
delta-BHC	0.0950	0.0030	0.010	ug/l	0.100		95 70-130			
Dieldrin	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
Endosulfan I	0.0679	0.0030	0.010	ug/l	0.100		68 70-130			BS-04
Endosulfan II	0.0729	0.0019	0.010	ug/l	0.100		73 70-130			
Endosulfan sulfate	0.0617	0.0030	0.010	ug/l	0.100		62 70-130			BS-04
Endrin	0.0936	0.0030	0.010	ug/l	0.100		94 70-130			
Endrin aldehyde	0.0464	0.0040	0.010	ug/l	0.100		46 70-130			Q-02
gamma-BHC (Lindane)	0.0843	0.0030	0.010	ug/l	0.100		84 70-130			
Heptachlor	0.0785	0.0031	0.010	ug/l	0.100		78 70-130			
Heptachlor epoxide	0.0847	0.0019	0.010	ug/l	0.100		85 70-130			
Methoxychlor	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0697			ug/l	0.100		70 70-130			
LCS (W4B2423-BS2)					Prepared: 02/29/24 Analyzed: 03/05/24					
Aroclor 1016	0.901	0.048	0.10	ug/l	1.00		90 70-130			
Aroclor 1260	0.620	0.076	0.10	ug/l	1.00		62 70-130			Q-02
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0795			ug/l	0.100		79 70-130			
LCS Dup (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	0.0889	0.0030	0.010	ug/l	0.100		89 70-130	16	30	
4,4'-DDE	0.0670	0.0040	0.010	ug/l	0.100		67 70-130	12	30	Q-02
4,4'-DDT	0.130	0.0030	0.010	ug/l	0.100		130 70-130	14	30	
Aldrin	0.0208	0.0040	0.010	ug/l	0.100		21 50-130	13	30	Q-02
alpha-BHC	0.0961	0.0015	0.010	ug/l	0.100		96 70-130	16	30	
beta-BHC	0.101	0.0045	0.010	ug/l	0.100		101 70-130	17	30	
delta-BHC	0.111	0.0030	0.010	ug/l	0.100		111 70-130	16	30	
Dieldrin	0.0902	0.0030	0.010	ug/l	0.100		90 70-130	17	30	
Endosulfan I	0.0798	0.0030	0.010	ug/l	0.100		80 70-130	16	30	
Endosulfan II	0.0839	0.0019	0.010	ug/l	0.100		84 70-130	14	30	
Endosulfan sulfate	0.0748	0.0030	0.010	ug/l	0.100		75 70-130	19	30	
Endrin	0.107	0.0030	0.010	ug/l	0.100		107 70-130	13	30	
Endrin aldehyde	0.0465	0.0040	0.010	ug/l	0.100		46 70-130	0.3	30	Q-02
gamma-BHC (Lindane)	0.0987	0.0030	0.010	ug/l	0.100		99 70-130	16	30	
Heptachlor	0.0931	0.0031	0.010	ug/l	0.100		93 70-130	17	30	
Heptachlor epoxide	0.0991	0.0019	0.010	ug/l	0.100		99 70-130	16	30	
Methoxychlor	0.0944	0.0030	0.010	ug/l	0.100		94 70-130	21	30	
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0972			ug/l	0.100		97 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B2161 - EPA 335.4											
Blank (W4B2161-BLK1)					Prepared: 02/27/24 Analyzed: 02/28/24						
Cyanide, Total	ND	1.5	5.0	ug/l							
LCS (W4B2161-BS1)					Prepared: 02/27/24 Analyzed: 02/28/24						
Cyanide, Total	104	1.5	5.0	ug/l	100	104	90-110				
Matrix Spike (W4B2161-MS1)					Prepared: 02/27/24 Analyzed: 02/28/24						
Cyanide, Total	231	1.5	5.0	ug/l	200	21.8	105	90-110			
Matrix Spike Dup (W4B2161-MSD1)					Prepared: 02/27/24 Analyzed: 02/28/24						
Cyanide, Total	232	1.5	5.0	ug/l	200	21.8	105	90-110	0.4	20	

Quality Control Results

(Continued)

Diquat and Paraquat by EPA 549.2

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1814 - EPA 549.2											
Blank (W4B1814-BLK1)					Prepared: 02/22/24 Analyzed: 02/28/24						
Diquat	ND	1.2	4.0	ug/l							
LCS (W4B1814-BS1)					Prepared: 02/22/24 Analyzed: 02/28/24						
Diquat	20.1	1.2	4.0	ug/l	20.0	101	70-130				
Matrix Spike (W4B1814-MS1)					Prepared: 02/22/24 Analyzed: 02/28/24						
Diquat	20.6	1.2	4.0	ug/l	20.0	ND	103	46-122			
Matrix Spike Dup (W4B1814-MSD1)					Prepared: 02/22/24 Analyzed: 02/28/24						
Diquat	19.8	1.2	4.0	ug/l	20.0	ND	99	46-122	4	30	

Quality Control Results

(Continued)

Endothall By EPA 548.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1800 - EPA 548.1											
Blank (W4B1800-BLK1)					Prepared: 02/22/24 Analyzed: 02/27/24						
Endothall	ND	11	45	ug/l							
LCS (W4B1800-BS1)					Prepared: 02/22/24 Analyzed: 02/27/24						
Endothall	99.5	11	45	ug/l	100	99	80-120				
Matrix Spike (W4B1800-MS1)					Prepared: 02/22/24 Analyzed: 02/27/24						
Endothall	37.1	22	90	ug/l	200	ND	19	0.1-109			J
Matrix Spike Dup (W4B1800-MSD1)					Prepared: 02/22/24 Analyzed: 02/27/24						
Endothall	32.4	22	90	ug/l	200	ND	16	0.1-109	14	30	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Glycols by GC/FID

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1449 - EPA 8015B											
Blank (W4B1449-BLK1)											
Ethylene glycol	ND	4.7	10	mg/l							
<i>Surrogate(s)</i>											
1-Propanol	70.3			mg/l	100		70	50-150			
LCS (W4B1449-BS1)											
Ethylene glycol	79.1	4.7	10	mg/l	100		79	70-130			
<i>Surrogate(s)</i>											
1-Propanol	69.3			mg/l	100		69	50-150			
Matrix Spike (W4B1449-MS1)											
			Source: 4B16030-01			Prepared & Analyzed: 02/20/24					
Ethylene glycol	78.3	4.7	10	mg/l	100	ND	78	57-127			
<i>Surrogate(s)</i>											
1-Propanol	83.9			mg/l	100		84	50-150			
Matrix Spike Dup (W4B1449-MSD1)											
			Source: 4B16030-01			Prepared & Analyzed: 02/20/24					
Ethylene glycol	85.5	4.7	10	mg/l	100	ND	85	57-127	9	25	
<i>Surrogate(s)</i>											
1-Propanol	63.9			mg/l	100		64	50-150			

Quality Control Results

(Continued)

Glyphosate by EPA 547

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2068 - EPA 547											
Blank (W4B2068-BLK1)											
Glyphosate	ND	1.8	5.0	ug/l							
LCS (W4B2068-BS1)											
Glyphosate	24.1	1.8	5.0	ug/l	25.0		96	70-130			
Matrix Spike (W4B2068-MS1)											
			Source: 3L04005-04			Prepared & Analyzed: 02/26/24					
Glyphosate	26.5	1.8	5.0	ug/l	25.0	ND	106	41-149			
Matrix Spike (W4B2068-MS2)											
			Source: 3L04005-05			Prepared & Analyzed: 02/26/24					
Glyphosate	30.0	1.8	5.0	ug/l	25.0	ND	120	41-149			
Matrix Spike Dup (W4B2068-MSD1)											
			Source: 3L04005-04			Prepared & Analyzed: 02/26/24					
Glyphosate	24.9	1.8	5.0	ug/l	25.0	ND	100	41-149	6	30	
Matrix Spike Dup (W4B2068-MSD2)											
			Source: 3L04005-05			Prepared & Analyzed: 02/26/24					
Glyphosate	28.5	1.8	5.0	ug/l	25.0	ND	114	41-149	5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results (Continued)

Haloacetic Acids (HAAs) by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1636 - EPA 552.3											
Blank (W4B1636-BLK1)						Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	ND	0.28	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l							
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l							
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.3			ug/l	10.0		103	70-130			
LCS (W4B1636-BS1)						Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	11.5	0.28	1.0	ug/l	10.0		115	70-130			
Dichloroacetic acid (dcaa)	10.3	0.29	1.0	ug/l	10.0		103	70-130			
Monobromoacetic acid (mbaa)	10.1	0.34	1.0	ug/l	10.0		101	70-130			
Monochloroacetic acid (mcaa)	9.57	0.31	2.0	ug/l	10.0		96	70-130			
Trichloroacetic acid (tcaa)	10.7	0.29	1.0	ug/l	10.0		107	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.3			ug/l	10.0		103	70-130			
Matrix Spike (W4B1636-MS1)						Prepared: 02/21/24 Analyzed: 03/06/24					
		Source: 3L19003-01									
Dibromoacetic acid (dbaa)	12.7	0.28	1.0	ug/l	10.0	1.23	115	70-130			
Dichloroacetic acid (dcaa)	18.9	0.29	1.0	ug/l	10.0	8.80	101	70-130			
Monobromoacetic acid (mbaa)	10.5	0.34	1.0	ug/l	10.0	ND	105	70-130			
Monochloroacetic acid (mcaa)	10.6	0.31	2.0	ug/l	10.0	0.974	96	70-130			
Trichloroacetic acid (tcaa)	22.3	0.29	1.0	ug/l	10.0	11.3	110	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.4			ug/l	10.0		104	70-130			
Matrix Spike Dup (W4B1636-MSD1)						Prepared: 02/21/24 Analyzed: 03/06/24					
		Source: 3L19003-01									
Dibromoacetic acid (dbaa)	12.7	0.28	1.0	ug/l	10.0	1.23	115	70-130	0.04	30	
Dichloroacetic acid (dcaa)	19.0	0.29	1.0	ug/l	10.0	8.80	102	70-130	0.5	30	
Monobromoacetic acid (mbaa)	10.6	0.34	1.0	ug/l	10.0	ND	106	70-130	1	30	
Monochloroacetic acid (mcaa)	10.8	0.31	2.0	ug/l	10.0	0.974	99	70-130	2	30	
Trichloroacetic acid (tcaa)	22.3	0.29	1.0	ug/l	10.0	11.3	110	70-130	0.003	30	
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.3			ug/l	10.0		103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0568 - EPA 245.1											
Blank (W4C0568-BLK1)											
Mercury, Total	ND	0.037	0.050	ug/l							
					Prepared: 03/07/24 Analyzed: 03/12/24						
LCS (W4C0568-BS1)											
Mercury, Total	1.09	0.037	0.050	ug/l	1.00		109	85-115			
					Prepared: 03/07/24 Analyzed: 03/12/24						
Matrix Spike (W4C0568-MS1)											
Mercury, Total	1.09	0.037	0.050	ug/l	1.00	ND	109	70-130			
					Prepared: 03/07/24 Analyzed: 03/12/24						
Matrix Spike (W4C0568-MS2)											
Mercury, Total	1.05	0.037	0.050	ug/l	1.00	ND	105	70-130			
					Prepared: 03/07/24 Analyzed: 03/12/24						
Matrix Spike Dup (W4C0568-MSD1)											
Mercury, Total	1.08	0.037	0.050	ug/l	1.00	ND	108	70-130	0.7	20	
					Prepared: 03/07/24 Analyzed: 03/12/24						
Matrix Spike Dup (W4C0568-MSD2)											
Mercury, Total	1.06	0.037	0.050	ug/l	1.00	ND	106	70-130	2	20	
					Prepared: 03/07/24 Analyzed: 03/12/24						

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533											
Blank (W4C0509-BLK1)						Prepared: 03/07/24 Analyzed: 03/10/24					
11CI-PF3OUdS	ND	0.89	2.0	ng/l							
4:2 FTS	ND	0.83	2.0	ng/l							
6:2 FTS	ND	0.78	2.0	ng/l							
8:2 FTS	ND	0.68	2.0	ng/l							
9CI-PF3ONS	ND	0.84	2.0	ng/l							
ADONA	ND	0.71	2.0	ng/l							
HFPO-DA	ND	0.92	2.0	ng/l							
NFDHA	ND	0.75	2.0	ng/l							
PFBA	ND	0.61	2.0	ng/l							
PFBS	ND	0.46	2.0	ng/l							
PFDA	ND	0.64	2.0	ng/l							
PFDoA	ND	0.65	2.0	ng/l							
PFEESA	ND	0.45	2.0	ng/l							
PFHpA	ND	0.65	2.0	ng/l							
PFHpS	ND	0.60	2.0	ng/l							
PFHxA	ND	0.72	2.0	ng/l							
PFHxS	ND	0.99	2.0	ng/l							
PFMBA	ND	0.62	2.0	ng/l							
PFMPA	ND	0.42	2.0	ng/l							
PFNA	ND	0.88	2.0	ng/l							
PFOA	ND	0.92	2.0	ng/l							
PFOS	ND	0.68	2.0	ng/l							
PFPeA	ND	0.45	2.0	ng/l							
PFPeS	ND	0.50	2.0	ng/l							
PFUnA	ND	0.59	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-4:2 FTS	42.8			ng/l	40.0		107	50-200			
13C2-6:2 FTS	44.3			ng/l	40.0		111	50-200			
13C2-8:2 FTS	41.5			ng/l	40.0		104	50-200			
13C2-PFDoA	10.2			ng/l	10.0		102	50-200			
13C3-PFBS	11.2			ng/l	10.0		112	50-200			
13C3-PFHxS	11.3			ng/l	10.0		113	50-200			
13C4-PFBA	10.7			ng/l	10.0		107	50-200			
13C4-PFHpA	10.4			ng/l	10.0		104	50-200			
13C5-PFHxA	10.8			ng/l	10.0		108	50-200			
13C5-PFPeA	10.8			ng/l	10.0		108	50-200			
13C6-PFDA	10.7			ng/l	10.0		107	50-200			
13C7-PFUnA	10.3			ng/l	10.0		103	50-200			
13C8-PFOA	10.2			ng/l	10.0		102	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards

Reported:
04/04/2024 08:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)											
Blank (W4C0509-BLK1)						Prepared: 03/07/24 Analyzed: 03/10/24					
<i>Surrogate(s)</i>											
13C8-PFOS	10.8			ng/l	10.0		108	50-200			
13C9-PFNA	10.3			ng/l	10.0		103	50-200			
HFPO-DA-13C3	9.79			ng/l	10.0		98	50-200			
LCS (W4C0509-BS1)						Prepared: 03/07/24 Analyzed: 03/10/24					
11CI-PF3OUdS	2.33	0.89	2.0	ng/l	2.00		116	50-150			
4:2 FTS	2.54	0.83	2.0	ng/l	2.00		127	50-150			
6:2 FTS	2.64	0.78	2.0	ng/l	2.00		132	50-150			
8:2 FTS	2.56	0.68	2.0	ng/l	2.00		128	50-150			
9CI-PF3ONS	2.22	0.84	2.0	ng/l	2.00		111	50-150			
ADONA	2.36	0.71	2.0	ng/l	2.00		118	50-150			
HFPO-DA	2.43	0.92	2.0	ng/l	2.00		121	50-150			
NFDHA	2.41	0.75	2.0	ng/l	2.00		120	50-150			
PFBA	2.46	0.61	2.0	ng/l	2.00		123	50-150			
PFBS	2.46	0.46	2.0	ng/l	2.00		123	50-150			
PFDA	2.26	0.64	2.0	ng/l	2.00		113	50-150			
PFDoA	2.41	0.65	2.0	ng/l	2.00		121	50-150			
PFEESA	2.22	0.45	2.0	ng/l	2.00		111	50-150			
PFHpA	2.23	0.65	2.0	ng/l	2.00		111	50-150			
PFHpS	2.35	0.60	2.0	ng/l	2.00		118	50-150			
PFHxA	2.41	0.72	2.0	ng/l	2.00		121	50-150			
PFHxS	2.51	0.99	2.0	ng/l	2.00		126	50-150			
PFMBA	2.34	0.62	2.0	ng/l	2.00		117	50-150			
PFMPA	2.34	0.42	2.0	ng/l	2.00		117	50-150			
PFNA	2.05	0.88	2.0	ng/l	2.00		103	50-150			
PFOA	2.41	0.92	2.0	ng/l	2.00		121	50-150			
PFOS	2.17	0.68	2.0	ng/l	2.00		109	50-150			
PFPeA	2.24	0.45	2.0	ng/l	2.00		112	50-150			
PFPeS	2.47	0.50	2.0	ng/l	2.00		123	50-150			
PFUnA	2.34	0.59	2.0	ng/l	2.00		117	50-150			
<i>Surrogate(s)</i>											
13C2-4:2 FTS	40.5			ng/l	40.0		101	50-200			
13C2-6:2 FTS	40.8			ng/l	40.0		102	50-200			
13C2-8:2 FTS	41.6			ng/l	40.0		104	50-200			
13C2-PFDoA	10.2			ng/l	10.0		102	50-200			
13C3-PFBS	11.0			ng/l	10.0		110	50-200			
13C3-PFHxS	10.8			ng/l	10.0		108	50-200			
13C4-PFBA	11.3			ng/l	10.0		113	50-200			
13C4-PFHpA	10.5			ng/l	10.0		105	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)											
LCS (W4C0509-BS1)						Prepared: 03/07/24 Analyzed: 03/10/24					
<i>Surrogate(s)</i>											
13C5-PFHxA	10.4			ng/l	10.0		104	50-200			
13C5-PFPeA	11.4			ng/l	10.0		114	50-200			
13C6-PFDA	10.8			ng/l	10.0		108	50-200			
13C7-PFUnA	10.6			ng/l	10.0		106	50-200			
13C8-PFOA	10.3			ng/l	10.0		103	50-200			
13C8-PFOS	10.9			ng/l	10.0		109	50-200			
13C9-PFNA	11.0			ng/l	10.0		110	50-200			
HFPO-DA-13C3	10.5			ng/l	10.0		105	50-200			
LCS Dup (W4C0509-BSD1)						Prepared: 03/07/24 Analyzed: 03/10/24					
11CI-PF3OUdS	2.25	0.89	2.0	ng/l	2.00		113	50-150	3	30	
4:2 FTS	2.14	0.83	2.0	ng/l	2.00		107	50-150	17	30	
6:2 FTS	2.61	0.78	2.0	ng/l	2.00		130	50-150	1	30	
8:2 FTS	2.91	0.68	2.0	ng/l	2.00		146	50-150	13	30	
9CI-PF3ONS	2.11	0.84	2.0	ng/l	2.00		105	50-150	5	30	
ADONA	2.23	0.71	2.0	ng/l	2.00		111	50-150	6	30	
HFPO-DA	2.01	0.92	2.0	ng/l	2.00		100	50-150	19	30	
NFDHA	2.09	0.75	2.0	ng/l	2.00		105	50-150	14	30	
PFBA	2.40	0.61	2.0	ng/l	2.00		120	50-150	2	30	
PFBS	2.20	0.46	2.0	ng/l	2.00		110	50-150	11	30	
PFDA	2.23	0.64	2.0	ng/l	2.00		111	50-150	2	30	
PFDoA	2.22	0.65	2.0	ng/l	2.00		111	50-150	8	30	
PFEESA	2.26	0.45	2.0	ng/l	2.00		113	50-150	2	30	
PFHpA	2.21	0.65	2.0	ng/l	2.00		111	50-150	0.9	30	
PFHpS	2.26	0.60	2.0	ng/l	2.00		113	50-150	4	30	
PFHxA	2.08	0.72	2.0	ng/l	2.00		104	50-150	15	30	
PFHxS	2.15	0.99	2.0	ng/l	2.00		107	50-150	16	30	
PFMBA	2.31	0.62	2.0	ng/l	2.00		116	50-150	1	30	
PFMPA	2.22	0.42	2.0	ng/l	2.00		111	50-150	5	30	
PFNA	2.46	0.88	2.0	ng/l	2.00		123	50-150	18	30	
PFOA	2.39	0.92	2.0	ng/l	2.00		120	50-150	0.9	30	
PFOS	2.43	0.68	2.0	ng/l	2.00		122	50-150	11	30	
PFPeA	2.24	0.45	2.0	ng/l	2.00		112	50-150	0.2	30	
PFPeS	2.12	0.50	2.0	ng/l	2.00		106	50-150	15	30	
PFUnA	2.31	0.59	2.0	ng/l	2.00		115	50-150	1	30	
<i>Surrogate(s)</i>											
13C2-4:2 FTS	40.0			ng/l	40.0		100	50-200			
13C2-6:2 FTS	40.4			ng/l	40.0		101	50-200			
13C2-8:2 FTS	39.6			ng/l	40.0		99	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)											
LCS Dup (W4C0509-BSD1)						Prepared: 03/07/24 Analyzed: 03/10/24					
<i>Surrogate(s)</i>											
13C2-PFDoA	10.4			ng/l	10.0		104	50-200			
13C3-PFBS	10.2			ng/l	10.0		102	50-200			
13C3-PFHxS	10.7			ng/l	10.0		107	50-200			
13C4-PFBA	11.1			ng/l	10.0		111	50-200			
13C4-PFHpA	10.4			ng/l	10.0		104	50-200			
13C5-PFHxA	10.6			ng/l	10.0		106	50-200			
13C5-PFPeA	10.7			ng/l	10.0		107	50-200			
13C6-PFDA	10.5			ng/l	10.0		105	50-200			
13C7-PFUnA	10.1			ng/l	10.0		101	50-200			
13C8-PFOA	10.2			ng/l	10.0		102	50-200			
13C8-PFOS	11.1			ng/l	10.0		111	50-200			
13C9-PFNA	10.6			ng/l	10.0		106	50-200			
HFPO-DA-13C3	10.7			ng/l	10.0		107	50-200			

Batch: W4C0861 - EPA 533

Blank (W4C0861-BLK1)											
Prepared: 03/12/24 Analyzed: 03/14/24											
11CI-PF3OUdS	ND	0.89	2.0	ng/l							
4:2 FTS	ND	0.83	2.0	ng/l							
6:2 FTS	ND	0.78	2.0	ng/l							
8:2 FTS	ND	0.68	2.0	ng/l							
9CI-PF3ONS	ND	0.84	2.0	ng/l							
ADONA	ND	0.71	2.0	ng/l							
HFPO-DA	ND	0.92	2.0	ng/l							
NFDHA	ND	0.75	2.0	ng/l							
PFBA	ND	0.61	2.0	ng/l							
PFBS	ND	0.46	2.0	ng/l							
PFDA	ND	0.64	2.0	ng/l							
PFDoA	ND	0.65	2.0	ng/l							
PFEESA	ND	0.45	2.0	ng/l							
PFHpA	ND	0.65	2.0	ng/l							
PFHpS	ND	0.60	2.0	ng/l							
PFHxA	ND	0.72	2.0	ng/l							
PFHxS	ND	0.99	2.0	ng/l							
PFMBA	ND	0.62	2.0	ng/l							
PFMPA	ND	0.42	2.0	ng/l							
PFNA	ND	0.88	2.0	ng/l							
PFOA	ND	0.92	2.0	ng/l							
PFOS	ND	0.68	2.0	ng/l							
PFPeA	ND	0.45	2.0	ng/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards

Reported:
04/04/2024 08:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0861 - EPA 533 (Continued)											
Blank (W4C0861-BLK1)						Prepared: 03/12/24 Analyzed: 03/14/24					
PFPeS	ND	0.50	2.0	ng/l							
PUnA	ND	0.59	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-4:2 FTS	41.6			ng/l	40.0		104	50-200			
13C2-6:2 FTS	39.9			ng/l	40.0		100	50-200			
13C2-8:2 FTS	40.3			ng/l	40.0		101	50-200			
13C2-PFDoA	10.4			ng/l	10.0		104	50-200			
13C3-PFBS	11.1			ng/l	10.0		111	50-200			
13C3-PFHxS	11.6			ng/l	10.0		116	50-200			
13C4-PFBA	10.8			ng/l	10.0		108	50-200			
13C4-PFHpA	10.5			ng/l	10.0		105	50-200			
13C5-PFHxA	10.6			ng/l	10.0		106	50-200			
13C5-PFPeA	10.8			ng/l	10.0		108	50-200			
13C6-PFDA	10.7			ng/l	10.0		107	50-200			
13C7-PFUnA	10.4			ng/l	10.0		104	50-200			
13C8-PFOA	10.4			ng/l	10.0		104	50-200			
13C8-PFOS	10.7			ng/l	10.0		107	50-200			
13C9-PFNA	10.3			ng/l	10.0		103	50-200			
HFPO-DA-13C3	10.0			ng/l	10.0		100	50-200			
LCS (W4C0861-BS1)						Prepared: 03/12/24 Analyzed: 03/14/24					
11CI-PF3OUdS	1.89	0.89	2.0	ng/l	2.00		94	50-150			J
4:2 FTS	1.88	0.83	2.0	ng/l	2.00		94	50-150			J
6:2 FTS	2.87	0.78	2.0	ng/l	2.00		144	50-150			
8:2 FTS	1.85	0.68	2.0	ng/l	2.00		92	50-150			J
9CI-PF3ONS	1.94	0.84	2.0	ng/l	2.00		97	50-150			J
ADONA	2.11	0.71	2.0	ng/l	2.00		106	50-150			
HFPO-DA	2.07	0.92	2.0	ng/l	2.00		103	50-150			
NFDHA	1.85	0.75	2.0	ng/l	2.00		93	50-150			J
PFBA	2.29	0.61	2.0	ng/l	2.00		114	50-150			
PFBS	2.20	0.46	2.0	ng/l	2.00		110	50-150			
PFDA	2.11	0.64	2.0	ng/l	2.00		106	50-150			
PFDoA	1.95	0.65	2.0	ng/l	2.00		97	50-150			J
PFEESA	2.14	0.45	2.0	ng/l	2.00		107	50-150			
PFHpA	2.07	0.65	2.0	ng/l	2.00		104	50-150			
PFHpS	1.87	0.60	2.0	ng/l	2.00		94	50-150			J
PFHxA	2.14	0.72	2.0	ng/l	2.00		107	50-150			
PFHxS	2.12	0.99	2.0	ng/l	2.00		106	50-150			
PFMBA	2.10	0.62	2.0	ng/l	2.00		105	50-150			
PFMPA	2.05	0.42	2.0	ng/l	2.00		103	50-150			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0861 - EPA 533 (Continued)										
LCS (W4C0861-BS1)					Prepared: 03/12/24 Analyzed: 03/14/24					
PFNA	2.09	0.88	2.0	ng/l	2.00		105 50-150			
PFOA	2.43	0.92	2.0	ng/l	2.00		121 50-150			
PFOS	1.84	0.68	2.0	ng/l	2.00		92 50-150			J
PFPeA	2.07	0.45	2.0	ng/l	2.00		104 50-150			
PFPeS	1.97	0.50	2.0	ng/l	2.00		99 50-150			J
PFUnA	2.24	0.59	2.0	ng/l	2.00		112 50-150			
<i>Surrogate(s)</i>										
13C2-4:2 FTS	40.9			ng/l	40.0		102 50-200			
13C2-6:2 FTS	41.0			ng/l	40.0		102 50-200			
13C2-8:2 FTS	41.4			ng/l	40.0		103 50-200			
13C2-PFDoA	9.83			ng/l	10.0		98 50-200			
13C3-PFBS	11.3			ng/l	10.0		113 50-200			
13C3-PFHxS	11.4			ng/l	10.0		114 50-200			
13C4-PFBA	10.8			ng/l	10.0		108 50-200			
13C4-PFHpA	10.1			ng/l	10.0		101 50-200			
13C5-PFHxA	10.5			ng/l	10.0		105 50-200			
13C5-PFPeA	11.0			ng/l	10.0		110 50-200			
13C6-PFDA	9.83			ng/l	10.0		98 50-200			
13C7-PFUnA	9.61			ng/l	10.0		96 50-200			
13C8-PFOA	9.65			ng/l	10.0		97 50-200			
13C8-PFOS	11.2			ng/l	10.0		112 50-200			
13C9-PFNA	10.2			ng/l	10.0		102 50-200			
HFPO-DA-13C3	10.3			ng/l	10.0		103 50-200			
LCS Dup (W4C0861-BS1)					Prepared: 03/12/24 Analyzed: 03/14/24					
11CI-PF3OUdS	1.92	0.89	2.0	ng/l	2.00		96 50-150	1	30	J
4:2 FTS	1.54	0.83	2.0	ng/l	2.00		77 50-150	20	30	J
6:2 FTS	2.32	0.78	2.0	ng/l	2.00		116 50-150	21	30	
8:2 FTS	2.41	0.68	2.0	ng/l	2.00		120 50-150	26	30	
9CI-PF3ONS	1.95	0.84	2.0	ng/l	2.00		98 50-150	0.5	30	J
ADONA	2.18	0.71	2.0	ng/l	2.00		109 50-150	3	30	
HFPO-DA	2.16	0.92	2.0	ng/l	2.00		108 50-150	4	30	
NFDHA	1.92	0.75	2.0	ng/l	2.00		96 50-150	3	30	J
PFBA	2.28	0.61	2.0	ng/l	2.00		114 50-150	0.4	30	
PFBS	2.07	0.46	2.0	ng/l	2.00		103 50-150	6	30	
PFDA	2.24	0.64	2.0	ng/l	2.00		112 50-150	6	30	
PFDoA	2.05	0.65	2.0	ng/l	2.00		102 50-150	5	30	
PFEESA	2.15	0.45	2.0	ng/l	2.00		107 50-150	0.6	30	
PFHpA	2.24	0.65	2.0	ng/l	2.00		112 50-150	8	30	
PFHpS	2.18	0.60	2.0	ng/l	2.00		109 50-150	16	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0861 - EPA 533 (Continued)										
LCS Dup (W4C0861-BSD1)					Prepared: 03/12/24 Analyzed: 03/14/24					
PFHxA	2.02	0.72	2.0	ng/l	2.00	101	50-150	6	30	
PFHxS	1.99	0.99	2.0	ng/l	2.00	100	50-150	6	30	J
PFMBA	2.11	0.62	2.0	ng/l	2.00	106	50-150	0.7	30	
PFMPA	2.22	0.42	2.0	ng/l	2.00	111	50-150	8	30	
PFNA	2.20	0.88	2.0	ng/l	2.00	110	50-150	5	30	
PFOA	2.81	0.92	2.0	ng/l	2.00	141	50-150	15	30	
PFOS	1.94	0.68	2.0	ng/l	2.00	97	50-150	5	30	J
PFPeA	2.13	0.45	2.0	ng/l	2.00	107	50-150	3	30	
PFPeS	2.06	0.50	2.0	ng/l	2.00	103	50-150	4	30	
PFUnA	2.13	0.59	2.0	ng/l	2.00	106	50-150	5	30	
<i>Surrogate(s)</i>										
13C2-4:2 FTS	43.4			ng/l	40.0	109	50-200			
13C2-6:2 FTS	41.8			ng/l	40.0	105	50-200			
13C2-8:2 FTS	39.2			ng/l	40.0	98	50-200			
13C2-PFDoA	10.2			ng/l	10.0	102	50-200			
13C3-PFBS	11.6			ng/l	10.0	116	50-200			
13C3-PFHxS	11.1			ng/l	10.0	111	50-200			
13C4-PFBA	11.2			ng/l	10.0	112	50-200			
13C4-PFHpA	10.8			ng/l	10.0	108	50-200			
13C5-PFHxA	11.2			ng/l	10.0	112	50-200			
13C5-PFPeA	11.3			ng/l	10.0	113	50-200			
13C6-PFDA	10.1			ng/l	10.0	101	50-200			
13C7-PFUnA	10.5			ng/l	10.0	105	50-200			
13C8-PFOA	10.5			ng/l	10.0	105	50-200			
13C8-PFOS	11.6			ng/l	10.0	116	50-200			
13C9-PFNA	10.9			ng/l	10.0	109	50-200			
HFPO-DA-13C3	10.5			ng/l	10.0	105	50-200			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results (Continued)

Perchlorate by EPA 314.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier	
Batch: W4B1668 - EPA 314.0												
Blank (W4B1668-BLK1)												
Perchlorate	ND	0.26	1.0	ug/l	Prepared & Analyzed: 02/21/24							
LCS (W4B1668-BS1)												
Perchlorate	9.56	0.26	1.0	ug/l	10.0		96	85-115				
Matrix Spike (W4B1668-MS1)												
					Source: 4B09022-01			Prepared & Analyzed: 02/21/24				
Perchlorate	14.3	0.26	1.0	ug/l	10.0	5.39	90	80-120				
Matrix Spike Dup (W4B1668-MSD1)												
					Source: 4B09022-01			Prepared & Analyzed: 02/21/24				
Perchlorate	14.6	0.26	1.0	ug/l	10.0	5.39	92	80-120	2	15		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results (Continued)

Radiological Parameters by APHA/EPA Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0565 - EPA 900.0											
Blank (W4C0565-BLK1)											
Gross Alpha	-0.0900			pCi/L							
Counting Uncertainty: 0.355	MDA: 0.616										
Gross Beta	-0.752			pCi/L							
Counting Uncertainty: 0.596	MDA: 0.983										
LCS (W4C0565-BS1)											
Gross Alpha	9.20			pCi/L	12.0		77	60-110			
Counting Uncertainty: 0.676	MDA: 0.684										
Gross Beta	13.0			pCi/L	16.0		81	72-123			
Counting Uncertainty: 0.736	MDA: 0.78										
Matrix Spike (W4C0565-MS1) Source: 3L04005-04											
Gross Alpha	7.90			pCi/L	12.0	0.152	65	28-124			
Counting Uncertainty: 0.872	MDA: 1.069										
Gross Beta	12.1			pCi/L	16.0	0.850	70	61-125			
Counting Uncertainty: 0.896	MDA: 1.178										
Matrix Spike (W4C0565-MS2) Source: 4B09021-01											
Gross Alpha	72.0			pCi/L	240	-4.21	30	28-124			
Counting Uncertainty: 13.618	MDA: 18.835										
Gross Beta	301			pCi/L	320	65.2	74	61-125			
Counting Uncertainty: 15.954	MDA: 17.962										
Matrix Spike Dup (W4C0565-MSD1) Source: 3L04005-04											
Gross Alpha	6.30			pCi/L	12.0	0.152	51	28-124	23	30	
Counting Uncertainty: 0.807	MDA: 1.018										
Gross Beta	12.3			pCi/L	16.0	0.850	72	61-125	2	30	
Counting Uncertainty: 0.751	MDA: 0.857										
Matrix Spike Dup (W4C0565-MSD2) Source: 4B09021-01											
Gross Alpha	72.1			pCi/L	240	-4.21	30	28-124	0.2	30	
Counting Uncertainty: 12.807	MDA: 17.114										
Gross Beta	278			pCi/L	320	65.2	66	61-125	8	30	
Counting Uncertainty: 17.091	MDA: 21.238										

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2											
Blank (W4B2424-BLK1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	ND	0.063	0.10	ug/l							
Atrazine	ND	0.042	0.10	ug/l							
Benzo (a) pyrene	ND	0.045	0.10	ug/l							
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							
Bromacil	ND	0.24	0.50	ug/l							
Butachlor	ND	0.040	0.10	ug/l							
Captan	ND	0.32	1.0	ug/l							
Chlorpropham	ND	0.040	0.10	ug/l							
Diazinon	ND	0.022	0.10	ug/l							
Dimethoate	ND	0.041	0.20	ug/l							
Diphenamid	ND	0.030	0.10	ug/l							
Disulfoton	ND	0.11	0.20	ug/l							
EPTC	ND	0.020	0.10	ug/l							
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							
Metolachlor	ND	0.030	0.10	ug/l							
Metribuzin	ND	0.030	0.10	ug/l							
Molinate	ND	0.030	0.10	ug/l							
Prometryn	ND	0.030	0.10	ug/l							
Simazine	ND	0.058	0.10	ug/l							
Terbacil	ND	0.090	2.0	ug/l							
Thiobencarb	ND	0.069	0.10	ug/l							
Trithion	ND	0.054	0.10	ug/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00		99	70-130			
Perylene-d12	3.66			ug/l	5.00		73	50-120			
Triphenyl phosphate	4.65			ug/l	5.00		93	70-130			
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	ND	0.063	0.10	ug/l							QC-2
Atrazine	ND	0.042	0.10	ug/l							QC-2
Benzo (a) pyrene	ND	0.045	0.10	ug/l							QC-2
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							QC-2
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							QC-2
Bromacil	ND	0.24	0.50	ug/l							QC-2
Butachlor	ND	0.040	0.10	ug/l							QC-2
Captan	ND	0.32	1.0	ug/l							QC-2
Chlorpropham	ND	0.040	0.10	ug/l							QC-2
Diazinon	ND	0.022	0.10	ug/l							QC-2
Dimethoate	ND	0.041	0.20	ug/l							QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Semivolatiles Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Diphenamid	ND	0.030	0.10	ug/l							QC-2
Disulfoton	ND	0.11	0.20	ug/l							QC-2
EPTC	ND	0.020	0.10	ug/l							QC-2
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							QC-2
Metolachlor	ND	0.030	0.10	ug/l							QC-2
Metribuzin	ND	0.030	0.10	ug/l							QC-2
Molinate	ND	0.030	0.10	ug/l							QC-2
Prometryn	ND	0.030	0.10	ug/l							QC-2
Simazine	ND	0.058	0.10	ug/l							QC-2
Terbacil	ND	0.090	2.0	ug/l							QC-2
Thiobencarb	ND	0.069	0.10	ug/l							QC-2
Trithion	ND	0.054	0.10	ug/l							QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.84			ug/l	5.00		97	70-130			QC-2
Perylene-d12	4.14			ug/l	5.00		83	50-120			QC-2
Triphenyl phosphate	4.92			ug/l	5.00		98	70-130			QC-2
LCS (W4B2424-BS1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	9.57	0.063	0.10	ug/l	7.50		128	70-130			
Atrazine	4.30	0.042	0.10	ug/l	5.00		86	70-130			
Benzo (a) pyrene	4.04	0.045	0.10	ug/l	5.00		81	60-130			
Bis(2-ethylhexyl)adipate	8.19	0.38	5.0	ug/l	5.00		164	70-130			Q-08
Bis(2-ethylhexyl)phthalate	5.93	0.41	3.0	ug/l	5.00		119	70-130			
Bromacil	6.45	0.24	0.50	ug/l	5.00		129	70-130			
Butachlor	5.81	0.040	0.10	ug/l	5.00		116	70-130			
Captan	5.59	0.32	1.0	ug/l	5.00		112	70-130			
Chlorpropham	5.18	0.040	0.10	ug/l	5.00		104	70-130			
Diazinon	3.38	0.022	0.10	ug/l	5.00		68	50-120			
Dimethoate	3.81	0.041	0.20	ug/l	5.00		76	50-120			
Diphenamid	5.69	0.030	0.10	ug/l	5.00		114	70-130			
Disulfoton	3.98	0.11	0.20	ug/l	5.00		80	50-120			
EPTC	4.45	0.020	0.10	ug/l	5.00		89	70-130			
Hexachlorocyclopentadiene	2.20	0.092	1.0	ug/l	2.50		88	33-106			
Metolachlor	6.29	0.030	0.10	ug/l	5.00		126	60-130			
Metribuzin	5.45	0.030	0.10	ug/l	5.00		109	50-120			
Molinate	3.79	0.030	0.10	ug/l	5.00		76	70-130			
Prometryn	3.05	0.030	0.10	ug/l	5.00		61	30-120			
Simazine	4.66	0.058	0.10	ug/l	5.00		93	60-130			
Terbacil	5.12	0.090	2.0	ug/l	5.00		102	70-130			
Thiobencarb	6.72	0.069	0.10	ug/l	5.00		134	70-130			Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Semivolatiles Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
LCS (W4B2424-BS1)											
Trithion	6.14	0.054	0.10	ug/l	5.00		123	70-130			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	2.62			ug/l	5.00		52	70-130			S-11
Perylene-d12	4.14			ug/l	5.00		83	50-120			
Triphenyl phosphate	4.38			ug/l	5.00		88	70-130			
LCS (W4B2424-BS2)											
Prepared: 02/29/24 Analyzed: 03/23/24											
Alachlor	7.14	0.063	0.10	ug/l	7.50		95	70-130			QC-2
Atrazine	4.76	0.042	0.10	ug/l	5.00		95	70-130			QC-2
Benzo (a) pyrene	4.07	0.045	0.10	ug/l	5.00		81	60-130			QC-2
Bis(2-ethylhexyl)adipate	5.27	0.38	5.0	ug/l	5.00		105	70-130			QC-2
Bis(2-ethylhexyl)phthalate	4.97	0.41	3.0	ug/l	5.00		99	70-130			QC-2
Bromacil	4.80	0.24	0.50	ug/l	5.00		96	70-130			QC-2
Butachlor	4.38	0.040	0.10	ug/l	5.00		88	70-130			QC-2
Captan	4.76	0.32	1.0	ug/l	5.00		95	70-130			QC-2
Chlorpropham	4.70	0.040	0.10	ug/l	5.00		94	70-130			QC-2
Diazinon	3.01	0.022	0.10	ug/l	5.00		60	50-120			QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00		76	50-120			QC-2
Diphenamid	4.98	0.030	0.10	ug/l	5.00		100	70-130			QC-2
Disulfoton	4.23	0.11	0.20	ug/l	5.00		85	50-120			QC-2
EPTC	5.02	0.020	0.10	ug/l	5.00		100	70-130			QC-2
Hexachlorocyclopentadiene	2.06	0.092	1.0	ug/l	2.50		82	33-106			QC-2
Metolachlor	4.64	0.030	0.10	ug/l	5.00		93	60-130			QC-2
Metribuzin	4.44	0.030	0.10	ug/l	5.00		89	50-120			QC-2
Molinate	4.95	0.030	0.10	ug/l	5.00		99	70-130			QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00		60	30-120			QC-2
Simazine	4.53	0.058	0.10	ug/l	5.00		91	60-130			QC-2
Terbacil	5.50	0.090	2.0	ug/l	5.00		110	70-130			QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00		99	70-130			QC-2
Trithion	4.63	0.054	0.10	ug/l	5.00		93	70-130			QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.96			ug/l	5.00		99	70-130			QC-2
Perylene-d12	4.41			ug/l	5.00		88	50-120			QC-2
Triphenyl phosphate	4.83			ug/l	5.00		97	70-130			QC-2
LCS Dup (W4B2424-BS1)											
Prepared: 02/29/24 Analyzed: 03/09/24											
Alachlor	10.3	0.063	0.10	ug/l	7.50		137	70-130	7	30	Q-08
Atrazine	4.62	0.042	0.10	ug/l	5.00		92	70-130	7	30	
Benzo (a) pyrene	4.17	0.045	0.10	ug/l	5.00		83	60-130	3	30	
Bis(2-ethylhexyl)adipate	7.82	0.38	5.0	ug/l	5.00		156	70-130	5	30	Q-08
Bis(2-ethylhexyl)phthalate	6.69	0.41	3.0	ug/l	5.00		134	70-130	12	30	Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS Dup (W4B2424-BSD1)					Prepared: 02/29/24 Analyzed: 03/09/24					
Bromacil	6.32	0.24	0.50	ug/l	5.00	126	70-130	2	30	
Butachlor	5.69	0.040	0.10	ug/l	5.00	114	70-130	2	30	
Captan	6.03	0.32	1.0	ug/l	5.00	121	70-130	8	30	
Chlorpropham	5.50	0.040	0.10	ug/l	5.00	110	70-130	6	30	
Diazinon	3.48	0.022	0.10	ug/l	5.00	70	50-120	3	30	
Dimethoate	4.25	0.041	0.20	ug/l	5.00	85	50-120	11	30	
Diphenamid	5.82	0.030	0.10	ug/l	5.00	116	70-130	2	30	
Disulfoton	4.30	0.11	0.20	ug/l	5.00	86	50-120	8	30	
EPTC	4.82	0.020	0.10	ug/l	5.00	96	70-130	8	30	
Hexachlorocyclopentadiene	2.39	0.092	1.0	ug/l	2.50	96	33-106	8	30	
Metolachlor	6.82	0.030	0.10	ug/l	5.00	136	60-130	8	30	Q-08
Metribuzin	5.82	0.030	0.10	ug/l	5.00	116	50-120	7	30	
Molinate	4.08	0.030	0.10	ug/l	5.00	82	70-130	7	30	
Prometryn	2.94	0.030	0.10	ug/l	5.00	59	30-120	4	30	
Simazine	4.92	0.058	0.10	ug/l	5.00	98	60-130	5	30	
Terbacil	5.48	0.090	2.0	ug/l	5.00	110	70-130	7	30	
Thiobencarb	6.91	0.069	0.10	ug/l	5.00	138	70-130	3	30	Q-08
Trithion	6.93	0.054	0.10	ug/l	5.00	139	70-130	12	30	Q-08
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	5.26			ug/l	5.00	105	70-130			
Perylene-d12	3.95			ug/l	5.00	79	50-120			
Triphenyl phosphate	4.36			ug/l	5.00	87	70-130			
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	7.05	0.063	0.10	ug/l	7.50	94	70-130	1	30	QC-2
Atrazine	4.88	0.042	0.10	ug/l	5.00	98	70-130	2	30	QC-2
Benzo (a) pyrene	4.12	0.045	0.10	ug/l	5.00	82	60-130	1	30	QC-2
Bis(2-ethylhexyl)adipate	5.68	0.38	5.0	ug/l	5.00	114	70-130	7	30	QC-2
Bis(2-ethylhexyl)phthalate	5.39	0.41	3.0	ug/l	5.00	108	70-130	8	30	QC-2
Bromacil	4.68	0.24	0.50	ug/l	5.00	94	70-130	2	30	QC-2
Butachlor	4.62	0.040	0.10	ug/l	5.00	92	70-130	6	30	QC-2
Captan	4.96	0.32	1.0	ug/l	5.00	99	70-130	4	30	QC-2
Chlorpropham	5.17	0.040	0.10	ug/l	5.00	103	70-130	10	30	QC-2
Diazinon	2.81	0.022	0.10	ug/l	5.00	56	50-120	7	30	QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00	76	50-120	0.2	30	QC-2
Diphenamid	5.12	0.030	0.10	ug/l	5.00	102	70-130	3	30	QC-2
Disulfoton	4.28	0.11	0.20	ug/l	5.00	86	50-120	1	30	QC-2
EPTC	5.25	0.020	0.10	ug/l	5.00	105	70-130	5	30	QC-2
Hexachlorocyclopentadiene	2.16	0.092	1.0	ug/l	2.50	87	33-106	5	30	QC-2
Metolachlor	4.55	0.030	0.10	ug/l	5.00	91	60-130	2	30	QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
LCS Dup (W4B2424-BSD2)											
					Prepared: 02/29/24 Analyzed: 03/23/24						
Metribuzin	4.48	0.030	0.10	ug/l	5.00	90	50-120	1	30		QC-2
Molinate	5.69	0.030	0.10	ug/l	5.00	114	70-130	14	30		QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00	60	30-120	0.1	30		QC-2
Simazine	4.22	0.058	0.10	ug/l	5.00	84	60-130	7	30		QC-2
Terbacil	5.64	0.090	2.0	ug/l	5.00	113	70-130	3	30		QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00	99	70-130	0.03	30		QC-2
Trithion	4.58	0.054	0.10	ug/l	5.00	92	70-130	1	30		QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00	99	70-130				QC-2
Perylene-d12	4.23			ug/l	5.00	85	50-120				QC-2
Triphenyl phosphate	4.92			ug/l	5.00	98	70-130				QC-2

Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0010 - EPA 1613B											
Blank (W4C0010-BLK1)											
					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l							
LCS (W4C0010-BS1)											
					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	7.98	2.48	5.00	pg/l	10.0	80	73-146				
LCS Dup (W4C0010-BSD1)											
					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	9.48	2.48	5.00	pg/l	10.0	95	73-146	17	20		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results (Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2											
Blank (W4B2361-BLK1)						Prepared: 02/28/24 Analyzed: 02/29/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)										
Blank (W4B2361-BLK1)					Prepared: 02/28/24 Analyzed: 02/29/24					
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l						
Ethylbenzene	ND	0.21	0.50	ug/l						
Freon 113	ND	1.5	5.0	ug/l						
Hexachlorobutadiene	ND	0.40	0.50	ug/l						
Isopropylbenzene	ND	0.18	0.50	ug/l						
m,p-Xylene	ND	0.33	0.50	ug/l						
m-Dichlorobenzene	ND	0.14	0.50	ug/l						
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l						
Methylene chloride	ND	0.30	0.50	ug/l						
Naphthalene	ND	0.35	0.50	ug/l						
n-Butylbenzene	ND	0.29	0.50	ug/l						
n-Propylbenzene	ND	0.18	0.50	ug/l						
o-Dichlorobenzene	ND	0.19	0.50	ug/l						
o-Xylene	ND	0.20	0.50	ug/l						
p-Dichlorobenzene	ND	0.18	0.50	ug/l						
p-Isopropyltoluene	ND	0.25	0.50	ug/l						
sec-Butylbenzene	ND	0.24	0.50	ug/l						
Styrene	ND	0.19	0.50	ug/l						
Tert-amyl methyl ether	ND	0.59	2.0	ug/l						
tert-Butylbenzene	ND	0.18	0.50	ug/l						
Tetrachloroethene	ND	0.18	0.50	ug/l						
THMs, Total	ND		0.50	ug/l						
Toluene	ND	0.29	0.50	ug/l						
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l						
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l						
Trichloroethene	ND	0.18	0.50	ug/l						
Trichlorofluoromethane	ND	0.18	0.50	ug/l						
Vinyl chloride	ND	0.18	0.50	ug/l						
Xylenes, Total	ND	0.33	0.50	ug/l						
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	40.9			ug/l	50.0		82 70-130			
4-Bromofluorobenzene	39.5			ug/l	50.0		79 70-130			
LCS (W4B2361-BS1)					Prepared: 02/28/24 Analyzed: 02/29/24					
1,1,1,2-Tetrachloroethane	4.54	0.24	0.50	ug/l	5.00		91 70-130			
1,1,1-Trichloroethane	4.80	0.26	0.50	ug/l	5.00		96 70-130			
1,1,2,2-Tetrachloroethane	4.44	0.20	0.50	ug/l	5.00		89 70-130			
1,1,2-Trichloroethane	4.58	0.19	0.50	ug/l	5.00		92 70-130			
1,1-Dichloroethane	6.10	0.27	0.50	ug/l	5.00		122 70-130			
1,1-Dichloroethene	4.40	0.16	0.50	ug/l	5.00		88 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)											
LCS (W4B2361-BS1)						Prepared: 02/28/24 Analyzed: 02/29/24					
1,1-Dichloropropene	4.97	0.14	0.50	ug/l	5.00	99	70-130				
1,2,3-Trichlorobenzene	4.44	0.40	0.50	ug/l	5.00	89	70-130				
1,2,4-Trichlorobenzene	4.55	0.17	0.50	ug/l	5.00	91	70-130				
1,2,4-Trimethylbenzene	5.07	0.20	0.50	ug/l	5.00	101	70-130				
1,2-Dichloroethane	4.74	0.24	0.50	ug/l	5.00	95	70-130				
1,2-Dichloropropane	4.41	0.13	0.50	ug/l	5.00	88	70-130				
1,3,5-Trimethylbenzene	5.23	0.17	0.50	ug/l	5.00	105	70-130				
1,3-Dichloropropane	5.06	0.27	0.50	ug/l	5.00	101	70-130				
2,2-Dichloropropane	4.03	0.17	0.50	ug/l	5.00	81	70-130				
2-Butanone	4.89	1.5	5.0	ug/l	5.00	98	70-130				J
2-Chlorotoluene	5.37	0.15	0.50	ug/l	5.00	107	70-130				
2-Hexanone	4.16	1.2	5.0	ug/l	5.00	83	70-130				J
4-Chlorotoluene	5.29	0.15	0.50	ug/l	5.00	106	70-130				
4-Methyl-2-pentanone	4.24	1.8	5.0	ug/l	5.00	85	70-130				J
Acetone	41.1	3.1	5.0	ug/l	50.0	82	70-130				
Benzene	5.25	0.15	0.50	ug/l	5.00	105	70-130				
Bromobenzene	5.11	0.15	0.50	ug/l	5.00	102	70-130				
Bromochloromethane	4.68	0.15	0.50	ug/l	5.00	94	70-130				
Bromodichloromethane	4.57	0.24	0.50	ug/l	5.00	91	70-130				
Bromoform	4.58	0.38	0.50	ug/l	5.00	92	70-130				
Bromomethane	3.76	0.27	0.50	ug/l	5.00	75	70-130				
Carbon tetrachloride	4.88	0.27	0.50	ug/l	5.00	98	70-130				
Chlorobenzene	4.93	0.15	0.50	ug/l	5.00	99	70-130				
Chloroethane	4.20	0.17	0.50	ug/l	5.00	84	70-130				
Chloroform	4.74	0.27	0.50	ug/l	5.00	95	70-130				
Chloromethane	4.89	0.23	0.50	ug/l	5.00	98	70-130				
cis-1,2-Dichloroethene	4.75	0.25	0.50	ug/l	5.00	95	70-130				
cis-1,3-Dichloropropene	4.53	0.30	0.50	ug/l	5.00	91	70-130				
Dibromochloromethane	4.45	0.20	0.50	ug/l	5.00	89	70-130				
Dibromomethane	4.36	0.20	0.50	ug/l	5.00	87	70-130				
Dichlorodifluoromethane (Freon 12)	4.89	0.45	0.50	ug/l	5.00	98	70-130				
Di-isopropyl ether	14.9	1.1	2.0	ug/l	20.0	74	70-130				
Ethyl tert-butyl ether	18.3	1.0	2.0	ug/l	20.0	91	70-130				
Ethylbenzene	5.08	0.21	0.50	ug/l	5.00	102	70-130				
Freon 113	4.15	1.5	5.0	ug/l	5.00	83	70-130				J
Hexachlorobutadiene	4.80	0.40	0.50	ug/l	5.00	96	70-130				
Isopropylbenzene	5.49	0.18	0.50	ug/l	5.00	110	70-130				
m,p-Xylene	5.03	0.33	0.50	ug/l	5.00	101	70-130				
m-Dichlorobenzene	5.06	0.14	0.50	ug/l	5.00	101	70-130				

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)										
LCS (W4B2361-BS1)					Prepared: 02/28/24 Analyzed: 02/29/24					
Methyl tert-butyl ether (MTBE)	15.9	0.94	2.0	ug/l	20.0		80 70-130			
Methylene chloride	4.57	0.30	0.50	ug/l	5.00		91 70-130			
Naphthalene	4.60	0.35	0.50	ug/l	5.00		92 70-130			
n-Butylbenzene	5.07	0.29	0.50	ug/l	5.00		101 70-130			
n-Propylbenzene	5.33	0.18	0.50	ug/l	5.00		107 70-130			
o-Dichlorobenzene	4.85	0.19	0.50	ug/l	5.00		97 70-130			
o-Xylene	5.36	0.20	0.50	ug/l	5.00		107 70-130			
p-Dichlorobenzene	5.14	0.18	0.50	ug/l	5.00		103 70-130			
p-Isopropyltoluene	4.95	0.25	0.50	ug/l	5.00		99 70-130			
sec-Butylbenzene	5.08	0.24	0.50	ug/l	5.00		102 70-130			
Styrene	5.20	0.19	0.50	ug/l	5.00		104 70-130			
Tert-amyl methyl ether	19.9	0.59	2.0	ug/l	20.0		100 70-130			
tert-Butylbenzene	5.25	0.18	0.50	ug/l	5.00		105 70-130			
Tetrachloroethene	5.23	0.18	0.50	ug/l	5.00		105 70-130			
Toluene	5.10	0.29	0.50	ug/l	5.00		102 70-130			
trans-1,2-Dichloroethene	4.49	0.26	0.50	ug/l	5.00		90 70-130			
trans-1,3-Dichloropropene	4.70	0.32	0.50	ug/l	5.00		94 70-130			
Trichloroethene	4.82	0.18	0.50	ug/l	5.00		96 70-130			
Trichlorofluoromethane	4.14	0.18	0.50	ug/l	5.00		83 70-130			
Vinyl chloride	4.33	0.18	0.50	ug/l	5.00		87 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	51.1			ug/l	50.0		102 70-130			
4-Bromofluorobenzene	51.3			ug/l	50.0		103 70-130			
LCS Dup (W4B2361-BS1)					Prepared: 02/28/24 Analyzed: 02/29/24					
1,1,1,2-Tetrachloroethane	4.48	0.24	0.50	ug/l	5.00		90 70-130	1	30	
1,1,1-Trichloroethane	4.76	0.26	0.50	ug/l	5.00		95 70-130	0.9	30	
1,1,2,2-Tetrachloroethane	4.27	0.20	0.50	ug/l	5.00		85 70-130	4	30	
1,1,2-Trichloroethane	4.41	0.19	0.50	ug/l	5.00		88 70-130	4	30	
1,1-Dichloroethane	5.93	0.27	0.50	ug/l	5.00		119 70-130	3	30	
1,1-Dichloroethene	4.40	0.16	0.50	ug/l	5.00		88 70-130	0.1	30	
1,1-Dichloropropene	4.90	0.14	0.50	ug/l	5.00		98 70-130	1	30	
1,2,3-Trichlorobenzene	4.29	0.40	0.50	ug/l	5.00		86 70-130	4	30	
1,2,4-Trichlorobenzene	4.61	0.17	0.50	ug/l	5.00		92 70-130	1	30	
1,2,4-Trimethylbenzene	4.71	0.20	0.50	ug/l	5.00		94 70-130	7	30	
1,2-Dichloroethane	4.66	0.24	0.50	ug/l	5.00		93 70-130	2	30	
1,2-Dichloropropane	4.29	0.13	0.50	ug/l	5.00		86 70-130	3	30	
1,3,5-Trimethylbenzene	4.67	0.17	0.50	ug/l	5.00		93 70-130	11	30	
1,3-Dichloropropane	4.90	0.27	0.50	ug/l	5.00		98 70-130	3	30	
2,2-Dichloropropane	3.82	0.17	0.50	ug/l	5.00		76 70-130	5	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)											
LCS Dup (W4B2361-BSD1)						Prepared: 02/28/24 Analyzed: 02/29/24					
2-Butanone	4.90	1.5	5.0	ug/l	5.00	98	70-130	0.2	30		J
2-Chlorotoluene	5.11	0.15	0.50	ug/l	5.00	102	70-130	5	30		
2-Hexanone	4.99	1.2	5.0	ug/l	5.00	100	70-130	18	30		J
4-Chlorotoluene	4.96	0.15	0.50	ug/l	5.00	99	70-130	6	30		
4-Methyl-2-pentanone	4.07	1.8	5.0	ug/l	5.00	81	70-130	4	30		J
Acetone	43.5	3.1	5.0	ug/l	50.0	87	70-130	6	30		
Benzene	4.93	0.15	0.50	ug/l	5.00	99	70-130	6	30		
Bromobenzene	4.14	0.15	0.50	ug/l	5.00	83	70-130	21	30		
Bromochloromethane	4.50	0.15	0.50	ug/l	5.00	90	70-130	4	30		
Bromodichloromethane	4.47	0.24	0.50	ug/l	5.00	89	70-130	2	30		
Bromoform	4.33	0.38	0.50	ug/l	5.00	87	70-130	6	30		
Bromomethane	4.50	0.27	0.50	ug/l	5.00	90	70-130	18	30		
Carbon tetrachloride	4.59	0.27	0.50	ug/l	5.00	92	70-130	6	30		
Chlorobenzene	4.66	0.15	0.50	ug/l	5.00	93	70-130	6	30		
Chloroethane	4.55	0.17	0.50	ug/l	5.00	91	70-130	8	30		
Chloroform	4.57	0.27	0.50	ug/l	5.00	91	70-130	4	30		
Chloromethane	4.56	0.23	0.50	ug/l	5.00	91	70-130	7	30		
cis-1,2-Dichloroethene	4.55	0.25	0.50	ug/l	5.00	91	70-130	4	30		
cis-1,3-Dichloropropene	4.46	0.30	0.50	ug/l	5.00	89	70-130	2	30		
Dibromochloromethane	4.68	0.20	0.50	ug/l	5.00	94	70-130	5	30		
Dibromomethane	4.29	0.20	0.50	ug/l	5.00	86	70-130	2	30		
Dichlorodifluoromethane (Freon 12)	4.70	0.45	0.50	ug/l	5.00	94	70-130	4	30		
Di-isopropyl ether	14.3	1.1	2.0	ug/l	20.0	72	70-130	4	30		
Ethyl tert-butyl ether	18.0	1.0	2.0	ug/l	20.0	90	70-130	2	30		
Ethylbenzene	4.84	0.21	0.50	ug/l	5.00	97	70-130	5	30		
Freon 113	4.23	1.5	5.0	ug/l	5.00	85	70-130	2	30		J
Hexachlorobutadiene	4.44	0.40	0.50	ug/l	5.00	89	70-130	8	30		
Isopropylbenzene	5.02	0.18	0.50	ug/l	5.00	100	70-130	9	30		
m,p-Xylene	4.54	0.33	0.50	ug/l	5.00	91	70-130	10	30		
m-Dichlorobenzene	4.91	0.14	0.50	ug/l	5.00	98	70-130	3	30		
Methyl tert-butyl ether (MTBE)	16.3	0.94	2.0	ug/l	20.0	81	70-130	2	30		
Methylene chloride	4.48	0.30	0.50	ug/l	5.00	90	70-130	2	30		
Naphthalene	4.28	0.35	0.50	ug/l	5.00	86	70-130	7	30		
n-Butylbenzene	4.83	0.29	0.50	ug/l	5.00	97	70-130	5	30		
n-Propylbenzene	5.00	0.18	0.50	ug/l	5.00	100	70-130	6	30		
o-Dichlorobenzene	4.62	0.19	0.50	ug/l	5.00	92	70-130	5	30		
o-Xylene	4.99	0.20	0.50	ug/l	5.00	100	70-130	7	30		
p-Dichlorobenzene	4.97	0.18	0.50	ug/l	5.00	99	70-130	3	30		
p-Isopropyltoluene	4.63	0.25	0.50	ug/l	5.00	93	70-130	7	30		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards

Reported:
 04/04/2024 08:32

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)											
LCS Dup (W4B2361-BSD1)											
					Prepared: 02/28/24 Analyzed: 02/29/24						
sec-Butylbenzene	4.63	0.24	0.50	ug/l	5.00		93	70-130	9	30	
Styrene	4.79	0.19	0.50	ug/l	5.00		96	70-130	8	30	
Tert-amyl methyl ether	19.4	0.59	2.0	ug/l	20.0		97	70-130	3	30	
tert-Butylbenzene	4.95	0.18	0.50	ug/l	5.00		99	70-130	6	30	
Tetrachloroethene	4.73	0.18	0.50	ug/l	5.00		95	70-130	10	30	
Toluene	4.83	0.29	0.50	ug/l	5.00		97	70-130	5	30	
trans-1,2-Dichloroethene	4.33	0.26	0.50	ug/l	5.00		87	70-130	4	30	
trans-1,3-Dichloropropene	4.47	0.32	0.50	ug/l	5.00		89	70-130	5	30	
Trichloroethene	4.79	0.18	0.50	ug/l	5.00		96	70-130	0.6	30	
Trichlorofluoromethane	4.27	0.18	0.50	ug/l	5.00		85	70-130	3	30	
Vinyl chloride	4.45	0.18	0.50	ug/l	5.00		89	70-130	3	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	49.4			ug/l	50.0		99	70-130			
4-Bromofluorobenzene	49.9			ug/l	50.0		100	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:32

Quality Control Results

(Continued)

Volatile Organics by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2414 - EPA 524.3											
Blank (W4B2414-BLK1) Prepared & Analyzed: 02/29/24											
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l							
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.426			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.413			ug/l	0.400		103	70-130			
LCS (W4B2414-BS1) Prepared & Analyzed: 02/29/24											
1,2-Dibromo-3-chloropropane	0.0625	0.0042	0.010	ug/l	0.0500		125	70-130			
1,2-Dibromoethane (EDB)	0.0563	0.0029	0.020	ug/l	0.0500		113	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.419			ug/l	0.400		105	70-130			
4-Bromofluorobenzene	0.409			ug/l	0.400		102	70-130			
LCS Dup (W4B2414-BSD1) Prepared & Analyzed: 02/29/24											
1,2-Dibromo-3-chloropropane	0.0608	0.0042	0.010	ug/l	0.0500		122	70-130	3	30	
1,2-Dibromoethane (EDB)	0.0569	0.0029	0.020	ug/l	0.0500		114	70-130	1	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.422			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.414			ug/l	0.400		104	70-130			
Duplicate (W4B2414-DUP1) Source: 4B15126-01 Prepared & Analyzed: 02/29/24											
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l		ND				30	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l		ND				30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.425			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.415			ug/l	0.400		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 DDW
 Standards
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 08:32

Notes and Definitions

Item	Definition
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
Q-02	Low recovery of this analyte in the QC sample. The analysis of the low level standard produced acceptable recovery indicating that the sample result might be accurately reported as Not Detected.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
U	Result not detected above the detection limit
%REC	Percent Recovery
Dil	Dilution
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B16031

Report Date: 3/13/2024

Received Date: 2/15/2024

Project: COSM 97-005 - COPCs

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

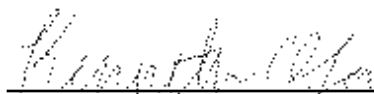
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/15/24 with the Chain-of-Custody document. The samples were received in good condition, at 2.2 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-4-54	Earl Garcia	4B16031-01	Water	02/15/24 09:15	
AT-GS-4-57	Earl Garcia	4B16031-02	Water	02/15/24 11:05	
AT-GS-4-58	Earl Garcia	4B16031-03	Water	02/15/24 09:40	
AT-UV-4-510	Earl Garcia	4B16031-04	Water	02/15/24 10:10	
AT-UV-4-510D	Earl Garcia	4B16031-05	Water	02/15/24 10:25	
AT-GAC-4-511	Earl Garcia	4B16031-06	Water	02/15/24 09:50	
AT-GAC-4-523	Earl Garcia	4B16031-07	Water	02/15/24 10:35	
AT-RO-4-514	Earl Garcia	4B16031-08	Water	02/15/24 11:20	
AT-RO-4-524	Earl Garcia	4B16031-09	Water	02/15/24 11:20	
AT-DEC-4-518	Earl Garcia	4B16031-10	Water	02/15/24 11:35	
AT-DEC-4-519	Earl Garcia	4B16031-11	Water	02/15/24 11:30	
AT-RES-4-522	Earl Garcia	4B16031-12	Water	02/15/24 11:50	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Freon 113	76-13-1			⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3	⊗		⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
THMs, Total				⊗
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-4-54

Sampled: 02/15/24 9:15 by Earl Garcia

4B16031-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1934		Preparation: EPA 5030B		Prepared: 02/23/24 07:53		Analyst: ADM	
1,2,3-Trichloropropane	0.042	0.0012	0.0050	ug/l	1	02/23/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913		Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA	
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	03/02/24	
ADONA	ND	0.49	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	0.78	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/02/24	
PFBS	1.7	0.51	1.8	ng/l	1	03/02/24	J
PFDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/02/24	
PFHpA	0.62	0.48	1.8	ng/l	1	03/02/24	J
PFHxA	2.2	0.44	1.8	ng/l	1	03/02/24	
PFHxS	1.5	0.53	1.8	ng/l	1	03/02/24	J
PFNA	ND	0.46	1.8	ng/l	1	03/02/24	
PFOA	0.68	0.60	1.8	ng/l	1	03/02/24	J
PFOS	ND	0.47	1.8	ng/l	1	03/02/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/02/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/02/24	

Surrogate(s)

13C2-PFDA	122%	Conc: 43.4	70-130	03/02/24
13C2-PFHxA	108%	Conc: 38.5	70-130	03/02/24
d5-EtFOSAA	112%	Conc: 161	70-130	03/02/24
HFPO-DA-13C3	103%	Conc: 36.7	70-130	03/02/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	0.75	0.27	0.50	ug/l	1	02/29/24	

4B16031

Page 3 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:15 by Earl Garcia

4B16031-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1-Dichloroethene	3.8	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	1.0	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	0.85	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	4.6	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	0.21	0.20	0.50	ug/l	1	02/29/24	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:15 by Earl Garcia

4B16031-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B			Prepared: 02/28/24 11:48		Analyst: ADM
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	1.6	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	5.6		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	49	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	0.24	0.18	0.50	ug/l	1	02/29/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4 82% Conc: 41.1 70-130 02/29/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:15 by Earl Garcia

4B16031-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
4-Bromofluorobenzene	84%	Conc: 42.1	70-130			02/29/24	

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:15 by Earl Garcia

4B16031-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1631		Preparation: EPA 522/SPE		Prepared: 02/21/24 07:41		Analyst: mld	
1,4-Dioxane	50	0.56	1.4	ug/l	20	02/27/24	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	90%	Conc: 8.82	70-130			02/27/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:05 by Earl Garcia

4B16031-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	0.13	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	77%	Conc: 7.43	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1934	Preparation: EPA 5030B		Prepared: 02/23/24 07:53		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/23/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	0.48	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	03/02/24	
ADONA	ND	0.48	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/02/24	
PFBS	ND	0.50	1.7	ng/l	1	03/02/24	
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/02/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/02/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/02/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/02/24	
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	ND	0.57	1.7	ng/l	1	03/02/24	
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	127%	Conc: 43.9	70-130			03/02/24	
13C2-PFHxA	114%	Conc: 39.4	70-130			03/02/24	
d5-EtFOSAA	115%	Conc: 159	70-130			03/02/24	
HFPO-DA-13C3	105%	Conc: 36.2	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 7 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:05 by Earl Garcia

4B16031-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	0.53	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	0.44	0.24	0.50	ug/l	1	02/29/24	J
Bromoform	11	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:05 by Earl Garcia

4B16031-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B			Prepared: 02/28/24 11:48		Analyst: ADM
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	2.6	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	0.33	0.18	0.50	ug/l	1	02/29/24	J
THMs, Total	14		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	5.4	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:05 by Earl Garcia

4B16031-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B			Prepared: 02/28/24 11:48		Analyst: ADM
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.3	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 42.1	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-58

Sampled: 02/15/24 9:40 by Earl Garcia

4B16031-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1934		Preparation: EPA 5030B		Prepared: 02/23/24 07:53		Analyst: ADM	
1,2,3-Trichloropropane	0.044	0.0012	0.0050	ug/l	1	02/23/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913		Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA	
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	03/02/24	
ADONA	ND	0.48	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.42	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.76	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/02/24	
PFBS	2.1	0.50	1.7	ng/l	1	03/02/24	
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.57	1.7	ng/l	1	03/02/24	
PFHpA	0.63	0.46	1.7	ng/l	1	03/02/24	J
PFHxA	2.3	0.42	1.7	ng/l	1	03/02/24	
PFHxS	1.5	0.52	1.7	ng/l	1	03/02/24	J
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	0.69	0.58	1.7	ng/l	1	03/02/24	J
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	

Surrogate(s)

13C2-PFDA	125%	Conc: 43.5	70-130	03/02/24
13C2-PFHxA	114%	Conc: 39.6	70-130	03/02/24
d5-EtFOSAA	112%	Conc: 156	70-130	03/02/24
HFPO-DA-13C3	106%	Conc: 37.0	70-130	03/02/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	0.73	0.27	0.50	ug/l	1	02/29/24	

4B16031

Page 11 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-58

Sampled: 02/15/24 9:40 by Earl Garcia

4B16031-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1-Dichloroethene	3.7	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	2.4	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	0.86	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	4.6	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	0.75	0.20	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-58

Sampled: 02/15/24 9:40 by Earl Garcia

4B16031-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B			Prepared: 02/28/24 11:48		Analyst: ADM
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	1.4	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	7.8		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	49	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	0.24	0.18	0.50	ug/l	1	02/29/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4 83% Conc: 41.3 70-130 02/29/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-4-58

Sampled: 02/15/24 9:40 by Earl Garcia

4B16031-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
4-Bromofluorobenzene	83%	Conc: 41.5	70-130			02/29/24	

Sample Results

(Continued)

Sample: AT-GS-4-58

Sampled: 02/15/24 9:40 by Earl Garcia

4B16031-03RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634		Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld	
1,4-Dioxane	44	0.56	1.4	ug/l	20	02/28/24	M-06
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	84%	Conc: 8.46	70-130			02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-4-510

Sampled: 02/15/24 10:10 by Earl Garcia

4B16031-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	82%	Conc: 8.30	70-130			02/28/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1934	Preparation: EPA 5030B		Prepared: 02/23/24 07:53		Analyst: ADM		
1,2,3-Trichloropropane	0.019	0.0012	0.0050	ug/l	1	02/23/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	0.46	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.44	1.7	ng/l	1	03/02/24	
ADONA	ND	0.46	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.72	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	03/02/24	
PFBS	1.7	0.48	1.7	ng/l	1	03/02/24	
PFDA	ND	0.37	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.54	1.7	ng/l	1	03/02/24	
PFHpA	0.67	0.44	1.7	ng/l	1	03/02/24	J
PFHxA	2.4	0.40	1.7	ng/l	1	03/02/24	
PFHxS	1.5	0.49	1.7	ng/l	1	03/02/24	J
PFNA	ND	0.43	1.7	ng/l	1	03/02/24	
PFOA	0.71	0.55	1.7	ng/l	1	03/02/24	J
PFOS	ND	0.44	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.37	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.39	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	123%	Conc: 40.7	70-130			03/02/24	
13C2-PFHxA	118%	Conc: 39.0	70-130			03/02/24	
d5-EtFOSAA	113%	Conc: 150	70-130			03/02/24	
HFPO-DA-13C3	109%	Conc: 36.1	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-4-510

Sampled: 02/15/24 10:10 by Earl Garcia

4B16031-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	0.37	0.27	0.50	ug/l	1	02/29/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	0.35	0.17	0.50	ug/l	1	02/29/24	J
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	0.83	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-4-510

Sampled: 02/15/24 10:10 by Earl Garcia

4B16031-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2362

Preparation: EPA 5030B

Prepared: 02/28/24 11:48

Analyst: ADM

Chloroform	3.9	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	3.9		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-UV-4-510

Sampled: 02/15/24 10:10 by Earl Garcia

4B16031-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
Trichlorofluoromethane	0.24	0.18	0.50	ug/l	1	02/29/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.4	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 42.1	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-4-510D

Sampled: 02/15/24 10:25 by Earl Garcia

4B16031-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	74%	Conc: 7.40	70-130			02/28/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1934	Preparation: EPA 5030B		Prepared: 02/23/24 07:53		Analyst: ADM		
1,2,3-Trichloropropane	0.018	0.0012	0.0050	ug/l	1	02/23/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	03/02/24	
ADONA	ND	0.55	2.0	ng/l	1	03/02/24	
EtFOSAA	ND	0.48	2.0	ng/l	1	03/02/24	
HFPO-DA	ND	0.87	2.0	ng/l	1	03/02/24	
MeFOSAA	ND	0.58	2.0	ng/l	1	03/02/24	
PFBS	1.7	0.58	2.0	ng/l	1	03/02/24	J
PFDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFDoA	ND	0.66	2.0	ng/l	1	03/02/24	
PFHpA	0.65	0.53	2.0	ng/l	1	03/02/24	J
PFHxA	2.3	0.49	2.0	ng/l	1	03/02/24	
PFHxS	1.4	0.59	2.0	ng/l	1	03/02/24	J
PFNA	ND	0.52	2.0	ng/l	1	03/02/24	
PFOA	ND	0.67	2.0	ng/l	1	03/02/24	
PFOS	ND	0.53	2.0	ng/l	1	03/02/24	
PFTeDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFTTrDA	ND	0.42	2.0	ng/l	1	03/02/24	
PFUnA	ND	0.48	2.0	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	124%	Conc: 45.1	70-130			03/02/24	
13C2-PFHxA	113%	Conc: 41.3	70-130			03/02/24	
d5-EtFOSAA	109%	Conc: 159	70-130			03/02/24	
HFPO-DA-13C3	104%	Conc: 38.1	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 19 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-4-510D

Sampled: 02/15/24 10:25 by Earl Garcia

4B16031-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	0.38	0.27	0.50	ug/l	1	02/29/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	0.82	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-4-510D

Sampled: 02/15/24 10:25 by Earl Garcia

4B16031-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B			Prepared: 02/28/24 11:48		Analyst: ADM
Chloroform	4.0	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	4.0		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-UV-4-510D

Sampled: 02/15/24 10:25 by Earl Garcia

4B16031-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B			Prepared: 02/28/24 11:48		Analyst: ADM
Trichlorofluoromethane	0.24	0.18	0.50	ug/l	1	02/29/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 40.9	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 42.0	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-4-511

Sampled: 02/15/24 9:50 by Earl Garcia

4B16031-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	4.1	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	73%	Conc: 7.20	70-130			02/28/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1934	Preparation: EPA 5030B		Prepared: 02/23/24 07:53		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/23/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	0.50	1.8	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	03/02/24	
ADONA	ND	0.49	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/02/24	
PFBS	ND	0.51	1.8	ng/l	1	03/02/24	
PFDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/02/24	
PFHpA	ND	0.47	1.8	ng/l	1	03/02/24	
PFHxA	ND	0.43	1.8	ng/l	1	03/02/24	
PFHxS	ND	0.53	1.8	ng/l	1	03/02/24	
PFNA	ND	0.46	1.8	ng/l	1	03/02/24	
PFOA	ND	0.59	1.8	ng/l	1	03/02/24	
PFOS	ND	0.47	1.8	ng/l	1	03/02/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/02/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	125%	Conc: 44.3	70-130			03/02/24	
13C2-PFHxA	115%	Conc: 40.7	70-130			03/02/24	
d5-EtFOSAA	111%	Conc: 158	70-130			03/02/24	
HFPO-DA-13C3	107%	Conc: 37.8	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 23 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-4-511

Sampled: 02/15/24 9:50 by Earl Garcia

4B16031-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-4-511

Sampled: 02/15/24 9:50 by Earl Garcia

4B16031-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2362

Preparation: EPA 5030B

Prepared: 02/28/24 11:48

Analyst: ADM

Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	ND		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-GAC-4-511

Sampled: 02/15/24 9:50 by Earl Garcia

4B16031-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.2	70-130			02/29/24	
4-Bromofluorobenzene	83%	Conc: 41.7	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-4-523

Sampled: 02/15/24 10:35 by Earl Garcia

4B16031-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	1.8	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	73%	Conc: 7.33	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1934	Preparation: EPA 5030B		Prepared: 02/23/24 07:53		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	03/02/24	
ADONA	ND	0.48	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.42	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.76	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/02/24	
PFBS	ND	0.50	1.7	ng/l	1	03/02/24	
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.57	1.7	ng/l	1	03/02/24	
PFHpA	ND	0.47	1.7	ng/l	1	03/02/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/02/24	
PFHxS	ND	0.52	1.7	ng/l	1	03/02/24	
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	ND	0.58	1.7	ng/l	1	03/02/24	
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	125%	Conc: 43.4	70-130			03/02/24	
13C2-PFHxA	114%	Conc: 39.8	70-130			03/02/24	
d5-EtFOSAA	113%	Conc: 157	70-130			03/02/24	
HFPO-DA-13C3	107%	Conc: 37.2	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 27 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-4-523

Sampled: 02/15/24 10:35 by Earl Garcia

4B16031-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-4-523

Sampled: 02/15/24 10:35 by Earl Garcia

4B16031-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	0.43	0.18	0.50	ug/l	1	02/29/24	J
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	ND		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-4-523

Sampled: 02/15/24 10:35 by Earl Garcia

4B16031-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B			Prepared: 02/28/24 11:48		Analyst: ADM
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 40.8	70-130			02/29/24	
4-Bromofluorobenzene	83%	Conc: 41.5	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-4-514

Sampled: 02/15/24 11:20 by Earl Garcia

4B16031-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	1.3	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	74%	Conc: 7.37	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1935	Preparation: EPA 5030B		Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11CI-PF3OUdS	ND	0.56	2.0	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.53	2.0	ng/l	1	03/02/24	
ADONA	ND	0.55	2.0	ng/l	1	03/02/24	
EtFOSAA	ND	0.48	2.0	ng/l	1	03/02/24	
HFPO-DA	ND	0.87	2.0	ng/l	1	03/02/24	
MeFOSAA	ND	0.58	2.0	ng/l	1	03/02/24	
PFBS	ND	0.58	2.0	ng/l	1	03/02/24	
PFDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFDoA	ND	0.66	2.0	ng/l	1	03/02/24	
PFHpA	ND	0.53	2.0	ng/l	1	03/02/24	
PFHxA	ND	0.49	2.0	ng/l	1	03/02/24	
PFHxS	ND	0.59	2.0	ng/l	1	03/02/24	
PFNA	ND	0.52	2.0	ng/l	1	03/02/24	
PFOA	ND	0.67	2.0	ng/l	1	03/02/24	
PFOS	ND	0.53	2.0	ng/l	1	03/02/24	
PFTeDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFTTrDA	ND	0.42	2.0	ng/l	1	03/02/24	
PFUnA	ND	0.48	2.0	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 41.8	70-130			03/02/24	
13C2-PFHxA	106%	Conc: 39.7	70-130			03/02/24	
d5-EtFOSAA	97%	Conc: 146	70-130			03/02/24	
HFPO-DA-13C3	98%	Conc: 36.6	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 31 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-4-514

Sampled: 02/15/24 11:20 by Earl Garcia

4B16031-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	0.26	0.24	0.50	ug/l	1	02/29/24	J
Bromoform	7.9	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-4-514

Sampled: 02/15/24 11:20 by Earl Garcia

4B16031-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	1.5	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	9.4		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	1.7	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-RO-4-514

Sampled: 02/15/24 11:20 by Earl Garcia

4B16031-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 40.0	70-130			02/29/24	
4-Bromofluorobenzene	81%	Conc: 40.5	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-4-524

Sampled: 02/15/24 11:20 by Earl Garcia

4B16031-09 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	0.17	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	89%	Conc: 8.43	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1935	Preparation: EPA 5030B		Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	0.56	2.0	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.53	2.0	ng/l	1	03/02/24	
ADONA	ND	0.55	2.0	ng/l	1	03/02/24	
EtFOSAA	ND	0.48	2.0	ng/l	1	03/02/24	
HFPO-DA	ND	0.87	2.0	ng/l	1	03/02/24	
MeFOSAA	ND	0.58	2.0	ng/l	1	03/02/24	
PFBS	ND	0.58	2.0	ng/l	1	03/02/24	
PFDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFDoA	ND	0.66	2.0	ng/l	1	03/02/24	
PFHpA	ND	0.53	2.0	ng/l	1	03/02/24	
PFHxA	ND	0.49	2.0	ng/l	1	03/02/24	
PFHxS	ND	0.59	2.0	ng/l	1	03/02/24	
PFNA	ND	0.52	2.0	ng/l	1	03/02/24	
PFOA	ND	0.67	2.0	ng/l	1	03/02/24	
PFOS	ND	0.53	2.0	ng/l	1	03/02/24	
PFTeDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFTTrDA	ND	0.42	2.0	ng/l	1	03/02/24	
PFUnA	ND	0.48	2.0	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	126%	Conc: 46.2	70-130			03/02/24	
13C2-PFHxA	119%	Conc: 43.3	70-130			03/02/24	
d5-EtFOSAA	104%	Conc: 152	70-130			03/02/24	
HFPO-DA-13C3	108%	Conc: 39.5	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 35 of 67

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-4-524

Sampled: 02/15/24 11:20 by Earl Garcia

4B16031-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	26	3.1	5.0	ug/l	1	02/29/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	4.6	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-4-524

Sampled: 02/15/24 11:20 by Earl Garcia

4B16031-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B		Prepared: 02/28/24 11:48		Analyst: ADM	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	1.2	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	5.8		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	2.8	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-4-524

Sampled: 02/15/24 11:20 by Earl Garcia

4B16031-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2362		Preparation: EPA 5030B			Prepared: 02/28/24 11:48		Analyst: ADM
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 40.9	70-130			02/29/24	
4-Bromofluorobenzene	83%	Conc: 41.6	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-4-518

Sampled: 02/15/24 11:35 by Earl Garcia

4B16031-10 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	0.20	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	86%	Conc: 8.68	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1935	Preparation: EPA 5030B		Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	0.56	2.0	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.53	2.0	ng/l	1	03/02/24	
ADONA	ND	0.55	2.0	ng/l	1	03/02/24	
EtFOSAA	ND	0.48	2.0	ng/l	1	03/02/24	
HFPO-DA	ND	0.87	2.0	ng/l	1	03/02/24	
MeFOSAA	ND	0.58	2.0	ng/l	1	03/02/24	
PFBS	ND	0.58	2.0	ng/l	1	03/02/24	
PFDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFDoA	ND	0.66	2.0	ng/l	1	03/02/24	
PFHpA	ND	0.53	2.0	ng/l	1	03/02/24	
PFHxA	ND	0.49	2.0	ng/l	1	03/02/24	
PFHxS	ND	0.59	2.0	ng/l	1	03/02/24	
PFNA	ND	0.52	2.0	ng/l	1	03/02/24	
PFOA	ND	0.67	2.0	ng/l	1	03/02/24	
PFOS	ND	0.53	2.0	ng/l	1	03/02/24	
PFTeDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFTTrDA	ND	0.42	2.0	ng/l	1	03/02/24	
PFUnA	ND	0.48	2.0	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	123%	Conc: 45.0	70-130			03/02/24	
13C2-PFHxA	119%	Conc: 43.4	70-130			03/02/24	
d5-EtFOSAA	101%	Conc: 147	70-130			03/02/24	
HFPO-DA-13C3	109%	Conc: 39.9	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 39 of 67

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-4-518

Sampled: 02/15/24 11:35 by Earl Garcia

4B16031-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	0.21	0.16	0.50	ug/l	1	02/29/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	5.9	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-4-518

Sampled: 02/15/24 11:35 by Earl Garcia

4B16031-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	1.4	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	7.3		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	2.8	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-4-518

Sampled: 02/15/24 11:35 by Earl Garcia

4B16031-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 40.8	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 41.8	70-130			02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-4-519

Sampled: 02/15/24 11:30 by Earl Garcia

4B16031-11 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	0.46	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	102%	Conc: 9.75	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1935	Preparation: EPA 5030B		Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	03/02/24	
ADONA	ND	0.48	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.42	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.76	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/02/24	
PFBS	ND	0.50	1.7	ng/l	1	03/02/24	
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.57	1.7	ng/l	1	03/02/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/02/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/02/24	
PFHxS	ND	0.52	1.7	ng/l	1	03/02/24	
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	ND	0.58	1.7	ng/l	1	03/02/24	
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	123%	Conc: 42.7	70-130			03/02/24	
13C2-PFHxA	114%	Conc: 39.6	70-130			03/02/24	
d5-EtFOSAA	100%	Conc: 139	70-130			03/02/24	
HFPO-DA-13C3	105%	Conc: 36.3	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 43 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-4-519

Sampled: 02/15/24 11:30 by Earl Garcia

4B16031-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	3.3	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-4-519

Sampled: 02/15/24 11:30 by Earl Garcia

4B16031-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	0.52	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	3.8		0.50	ug/l	1	02/29/24	
Toluene	0.31	0.29	0.50	ug/l	1	02/29/24	J
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	0.22	0.18	0.50	ug/l	1	02/29/24	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-4-519

Sampled: 02/15/24 11:30 by Earl Garcia

4B16031-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	81%	Conc: 40.7	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 42.1	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:50 by Earl Garcia

4B16031-12 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	0.21	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	87%	Conc: 8.47	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1935	Preparation: EPA 5030B		Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1913	Preparation: EPA 537/SPE		Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	0.56	2.0	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.53	2.0	ng/l	1	03/02/24	
ADONA	ND	0.55	2.0	ng/l	1	03/02/24	
EtFOSAA	ND	0.48	2.0	ng/l	1	03/02/24	
HFPO-DA	ND	0.87	2.0	ng/l	1	03/02/24	
MeFOSAA	ND	0.58	2.0	ng/l	1	03/02/24	
PFBS	ND	0.58	2.0	ng/l	1	03/02/24	
PFDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFDoA	ND	0.66	2.0	ng/l	1	03/02/24	
PFHpA	ND	0.53	2.0	ng/l	1	03/02/24	
PFHxA	ND	0.49	2.0	ng/l	1	03/02/24	
PFHxS	ND	0.59	2.0	ng/l	1	03/02/24	
PFNA	ND	0.52	2.0	ng/l	1	03/02/24	
PFOA	ND	0.67	2.0	ng/l	1	03/02/24	
PFOS	ND	0.53	2.0	ng/l	1	03/02/24	
PFTeDA	ND	0.45	2.0	ng/l	1	03/02/24	
PFTTrDA	ND	0.42	2.0	ng/l	1	03/02/24	
PFUnA	ND	0.48	2.0	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	119%	Conc: 45.2	70-130			03/02/24	
13C2-PFHxA	110%	Conc: 41.9	70-130			03/02/24	
d5-EtFOSAA	103%	Conc: 157	70-130			03/02/24	
HFPO-DA-13C3	102%	Conc: 38.6	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16031

Page 47 of 67

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:50 by Earl Garcia

4B16031-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	4.1	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:50 by Earl Garcia

4B16031-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	0.82	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	4.9		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	0.45	0.18	0.50	ug/l	1	02/29/24	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:50 by Earl Garcia

4B16031-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 41.8	70-130			02/29/24	
4-Bromofluorobenzene	86%	Conc: 42.8	70-130			02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1631 - EPA 522											
Blank (W4B1631-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.94			ug/l	10.0		89	70-130			
LCS (W4B1631-BS1)											
1,4-Dioxane	0.0451	0.028	0.070	ug/l	0.0600		75	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.64			ug/l	10.0		86	70-130			
LCS Dup (W4B1631-BSD1)											
1,4-Dioxane	0.0553	0.028	0.070	ug/l	0.0600		92	50-150	20	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.55			ug/l	10.0		96	70-130			
Batch: W4B1634 - EPA 522											
Blank (W4B1634-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.67			ug/l	10.0		87	70-130			
LCS (W4B1634-BS1)											
1,4-Dioxane	0.348	0.028	0.070	ug/l	0.400		87	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.37			ug/l	10.0		94	70-130			
LCS Dup (W4B1634-BSD1)											
1,4-Dioxane	0.373	0.028	0.070	ug/l	0.400		93	70-130	7	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.78			ug/l	10.0		98	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1934 - SRL 524M-TCP											
Blank (W4B1934-BLK1) Prepared & Analyzed: 02/23/24											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W4B1934-BS1) Prepared & Analyzed: 02/23/24											
1,2,3-Trichloropropane	0.0208	0.0012	0.0050	ug/l	0.0200		104	80-120			
LCS Dup (W4B1934-BSD1) Prepared & Analyzed: 02/23/24											
1,2,3-Trichloropropane	0.0230	0.0012	0.0050	ug/l	0.0200		115	80-120	10	20	
Duplicate (W4B1934-DUP1) Source: 4B12015-01 Prepared & Analyzed: 02/23/24											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
Batch: W4B1935 - SRL 524M-TCP											
Blank (W4B1935-BLK1) Prepared: 02/23/24 Analyzed: 02/24/24											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W4B1935-BS1) Prepared: 02/23/24 Analyzed: 02/24/24											
1,2,3-Trichloropropane	0.0197	0.0012	0.0050	ug/l	0.0200		99	80-120			
LCS Dup (W4B1935-BSD1) Prepared: 02/23/24 Analyzed: 02/24/24											
1,2,3-Trichloropropane	0.0218	0.0012	0.0050	ug/l	0.0200		109	80-120	10	20	
Duplicate (W4B1935-DUP1) Source: 4B16031-08 Prepared: 02/23/24 Analyzed: 02/24/24											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1913 - EPA 537.1									
Blank (W4B1913-BLK1)					Prepared: 02/22/24 Analyzed: 03/02/24				
11CI-PF3OUdS	ND	0.56	2.0	ng/l					
9CI-PF3ONS	ND	0.53	2.0	ng/l					
ADONA	ND	0.55	2.0	ng/l					
EtFOSAA	ND	0.48	2.0	ng/l					
HFPO-DA	ND	0.87	2.0	ng/l					
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	48.5			ng/l	40.0		121 70-130		
13C2-PFHxA	45.9			ng/l	40.0		115 70-130		
d5-EtFOSAA	173			ng/l	160		108 70-130		
HFPO-DA-13C3	43.0			ng/l	40.0		108 70-130		
LCS (W4B1913-BS1)					Prepared: 02/22/24 Analyzed: 03/02/24				
11CI-PF3OUdS	17.4	0.56	2.0	ng/l	20.0		87 70-130		
9CI-PF3ONS	17.3	0.53	2.0	ng/l	20.0		87 70-130		
ADONA	19.2	0.55	2.0	ng/l	20.0		96 70-130		
EtFOSAA	18.6	0.48	2.0	ng/l	20.0		93 70-130		
HFPO-DA	18.5	0.87	2.0	ng/l	20.0		93 70-130		
MeFOSAA	18.9	0.58	2.0	ng/l	20.0		95 70-130		
PFBS	19.7	0.58	2.0	ng/l	20.0		98 70-130		
PFDA	18.4	0.45	2.0	ng/l	20.0		92 70-130		
PFDoA	18.7	0.66	2.0	ng/l	20.0		94 70-130		
PFHpA	19.9	0.53	2.0	ng/l	20.0		100 70-130		
PFHxA	19.5	0.49	2.0	ng/l	20.0		97 70-130		
PFHxS	19.3	0.59	2.0	ng/l	20.0		97 70-130		
PFNA	19.5	0.52	2.0	ng/l	20.0		98 70-130		
PFOA	20.0	0.67	2.0	ng/l	20.0		100 70-130		
PFOS	18.6	0.53	2.0	ng/l	20.0		93 70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1913 - EPA 537.1 (Continued)										
LCS (W4B1913-BS1)					Prepared: 02/22/24 Analyzed: 03/02/24					
PFTeDA	18.0	0.45	2.0	ng/l	20.0		90 70-130			
PFTTrDA	18.2	0.42	2.0	ng/l	20.0		91 70-130			
PFUnA	18.9	0.48	2.0	ng/l	20.0		94 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	48.5			ng/l	40.0		121 70-130			
13C2-PFHxA	46.0			ng/l	40.0		115 70-130			
d5-EtFOSAA	180			ng/l	160		112 70-130			
HFPO-DA-13C3	43.7			ng/l	40.0		109 70-130			
LCS Dup (W4B1913-BSD1)					Prepared: 02/22/24 Analyzed: 03/02/24					
11Cl-PF3OUdS	17.8	0.56	2.0	ng/l	20.0		89 70-130	2	30	
9Cl-PF3ONS	18.0	0.53	2.0	ng/l	20.0		90 70-130	4	30	
ADONA	19.9	0.55	2.0	ng/l	20.0		99 70-130	3	30	
EtFOSAA	18.2	0.48	2.0	ng/l	20.0		91 70-130	3	30	
HFPO-DA	18.7	0.87	2.0	ng/l	20.0		93 70-130	0.9	30	
MeFOSAA	18.9	0.58	2.0	ng/l	20.0		94 70-130	0.3	30	
PFBS	19.7	0.58	2.0	ng/l	20.0		99 70-130	0.3	30	
PFDA	18.3	0.45	2.0	ng/l	20.0		91 70-130	0.9	30	
PFDoA	19.3	0.66	2.0	ng/l	20.0		96 70-130	3	30	
PFHpA	20.4	0.53	2.0	ng/l	20.0		102 70-130	2	30	
PFHxA	19.9	0.49	2.0	ng/l	20.0		100 70-130	2	30	
PFHxS	19.7	0.59	2.0	ng/l	20.0		98 70-130	2	30	
PFNA	20.2	0.52	2.0	ng/l	20.0		101 70-130	4	30	
PFOA	20.2	0.67	2.0	ng/l	20.0		101 70-130	0.8	30	
PFOS	19.1	0.53	2.0	ng/l	20.0		95 70-130	2	30	
PFTeDA	17.6	0.45	2.0	ng/l	20.0		88 70-130	2	30	
PFTTrDA	18.2	0.42	2.0	ng/l	20.0		91 70-130	0.07	30	
PFUnA	19.3	0.48	2.0	ng/l	20.0		97 70-130	2	30	
<i>Surrogate(s)</i>										
13C2-PFDA	48.5			ng/l	40.0		121 70-130			
13C2-PFHxA	47.6			ng/l	40.0		119 70-130			
d5-EtFOSAA	175			ng/l	160		110 70-130			
HFPO-DA-13C3	45.2			ng/l	40.0		113 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2362 - EPA 524.2											
Blank (W4B2362-BLK1)											
Prepared & Analyzed: 02/28/24											
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2362 - EPA 524.2 (Continued)											
Blank (W4B2362-BLK1)						Prepared & Analyzed: 02/28/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.8			ug/l	50.0		82	70-130			
4-Bromofluorobenzene	42.2			ug/l	50.0		84	70-130			
LCS (W4B2362-BS1)						Prepared & Analyzed: 02/28/24					
1,1,1,2-Tetrachloroethane	4.67	0.24	0.50	ug/l	5.00		93	70-130			
1,1,1-Trichloroethane	4.59	0.26	0.50	ug/l	5.00		92	70-130			
1,1,2,2-Tetrachloroethane	4.33	0.20	0.50	ug/l	5.00		87	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2362 - EPA 524.2 (Continued)									
LCS (W4B2362-BS1)					Prepared & Analyzed: 02/28/24				
1,1,2-Trichloroethane	4.42	0.19	0.50	ug/l	5.00	88	70-130		
1,1-Dichloroethane	4.34	0.27	0.50	ug/l	5.00	87	70-130		
1,1-Dichloroethene	4.25	0.16	0.50	ug/l	5.00	85	70-130		
1,1-Dichloropropene	4.27	0.14	0.50	ug/l	5.00	85	70-130		
1,2,3-Trichlorobenzene	4.65	0.40	0.50	ug/l	5.00	93	70-130		
1,2,3-Trichloropropane	4.56	0.22	0.50	ug/l	5.00	91	70-130		
1,2,4-Trichlorobenzene	5.02	0.17	0.50	ug/l	5.00	100	70-130		
1,2,4-Trimethylbenzene	4.51	0.20	0.50	ug/l	5.00	90	70-130		
1,2-Dichloroethane	4.39	0.24	0.50	ug/l	5.00	88	70-130		
1,2-Dichloropropane	4.25	0.13	0.50	ug/l	5.00	85	70-130		
1,3,5-Trimethylbenzene	4.48	0.17	0.50	ug/l	5.00	90	70-130		
1,3-Dichloropropane	4.54	0.27	0.50	ug/l	5.00	91	70-130		
2,2-Dichloropropane	4.69	0.17	0.50	ug/l	5.00	94	70-130		
2-Butanone	3.99	1.5	5.0	ug/l	5.00	80	70-130		J
2-Chlorotoluene	4.88	0.15	0.50	ug/l	5.00	98	70-130		
2-Hexanone	4.42	1.2	5.0	ug/l	5.00	88	70-130		J
4-Chlorotoluene	4.80	0.15	0.50	ug/l	5.00	96	70-130		
4-Methyl-2-pentanone	4.52	1.8	5.0	ug/l	5.00	90	70-130		J
Acetone	43.4	3.1	5.0	ug/l	50.0	87	70-130		
Benzene	4.44	0.15	0.50	ug/l	5.00	89	70-130		
Bromobenzene	4.93	0.15	0.50	ug/l	5.00	99	70-130		
Bromochloromethane	4.10	0.15	0.50	ug/l	5.00	82	70-130		
Bromodichloromethane	4.37	0.24	0.50	ug/l	5.00	87	70-130		
Bromoform	5.05	0.38	0.50	ug/l	5.00	101	70-130		
Bromomethane	4.42	0.27	0.50	ug/l	5.00	88	70-130		
Carbon Disulfide	4.40	0.25	0.50	ug/l	5.00	88	70-130		
Carbon tetrachloride	4.71	0.27	0.50	ug/l	5.00	94	70-130		
Chlorobenzene	4.98	0.15	0.50	ug/l	5.00	100	70-130		
Chloroethane	4.39	0.17	0.50	ug/l	5.00	88	70-130		
Chloroform	4.42	0.27	0.50	ug/l	5.00	88	70-130		
Chloromethane	3.77	0.23	0.50	ug/l	5.00	75	70-130		
cis-1,2-Dichloroethene	4.25	0.25	0.50	ug/l	5.00	85	70-130		
cis-1,3-Dichloropropene	4.53	0.30	0.50	ug/l	5.00	91	70-130		
Dibromochloromethane	4.75	0.20	0.50	ug/l	5.00	95	70-130		
Dibromomethane	4.48	0.20	0.50	ug/l	5.00	90	70-130		
Dichlorodifluoromethane (Freon 12)	4.30	0.45	0.50	ug/l	5.00	86	70-130		
Di-isopropyl ether	16.5	1.1	2.0	ug/l	20.0	83	70-130		
Ethyl tert-butyl ether	18.1	1.0	2.0	ug/l	20.0	90	70-130		
Ethylbenzene	4.45	0.21	0.50	ug/l	5.00	89	70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2362 - EPA 524.2 (Continued)										
LCS (W4B2362-BS1)					Prepared & Analyzed: 02/28/24					
Freon 113	4.55	1.5	5.0	ug/l	5.00		91 70-130			J
Hexachlorobutadiene	5.16	0.40	0.50	ug/l	5.00		103 70-130			
Isopropylbenzene	4.46	0.18	0.50	ug/l	5.00		89 70-130			
m,p-Xylene	4.49	0.33	0.50	ug/l	5.00		90 70-130			
m-Dichlorobenzene	4.76	0.14	0.50	ug/l	5.00		95 70-130			
Methyl tert-butyl ether (MTBE)	18.3	0.94	2.0	ug/l	20.0		92 70-130			
Methylene chloride	3.95	0.30	0.50	ug/l	5.00		79 70-130			
Naphthalene	4.44	0.35	0.50	ug/l	5.00		89 70-130			
n-Butylbenzene	4.62	0.29	0.50	ug/l	5.00		92 70-130			
n-Propylbenzene	4.35	0.18	0.50	ug/l	5.00		87 70-130			
o-Dichlorobenzene	4.72	0.19	0.50	ug/l	5.00		94 70-130			
o-Xylene	4.44	0.20	0.50	ug/l	5.00		89 70-130			
p-Dichlorobenzene	4.93	0.18	0.50	ug/l	5.00		99 70-130			
p-Isopropyltoluene	4.54	0.25	0.50	ug/l	5.00		91 70-130			
sec-Butylbenzene	4.44	0.24	0.50	ug/l	5.00		89 70-130			
Styrene	4.65	0.19	0.50	ug/l	5.00		93 70-130			
Tert-amyl methyl ether	18.8	0.59	2.0	ug/l	20.0		94 70-130			
tert-Butylbenzene	4.51	0.18	0.50	ug/l	5.00		90 70-130			
Tetrachloroethene	5.06	0.18	0.50	ug/l	5.00		101 70-130			
Toluene	4.61	0.29	0.50	ug/l	5.00		92 70-130			
trans-1,2-Dichloroethene	4.25	0.26	0.50	ug/l	5.00		85 70-130			
trans-1,3-Dichloropropene	5.05	0.32	0.50	ug/l	5.00		101 70-130			
Trichloroethene	4.66	0.18	0.50	ug/l	5.00		93 70-130			
Trichlorofluoromethane	4.70	0.18	0.50	ug/l	5.00		94 70-130			
Vinyl chloride	4.17	0.18	0.50	ug/l	5.00		83 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0		93 70-130			
4-Bromofluorobenzene	47.5			ug/l	50.0		95 70-130			
LCS Dup (W4B2362-BS1)					Prepared & Analyzed: 02/28/24					
1,1,1,2-Tetrachloroethane	4.86	0.24	0.50	ug/l	5.00		97 70-130	4	30	
1,1,1-Trichloroethane	4.70	0.26	0.50	ug/l	5.00		94 70-130	2	30	
1,1,2,2-Tetrachloroethane	4.61	0.20	0.50	ug/l	5.00		92 70-130	6	30	
1,1,2-Trichloroethane	4.69	0.19	0.50	ug/l	5.00		94 70-130	6	30	
1,1-Dichloroethane	4.58	0.27	0.50	ug/l	5.00		92 70-130	5	30	
1,1-Dichloroethene	4.37	0.16	0.50	ug/l	5.00		87 70-130	3	30	
1,1-Dichloropropene	4.47	0.14	0.50	ug/l	5.00		89 70-130	5	30	
1,2,3-Trichlorobenzene	5.13	0.40	0.50	ug/l	5.00		103 70-130	10	30	
1,2,3-Trichloropropane	4.93	0.22	0.50	ug/l	5.00		99 70-130	8	30	
1,2,4-Trichlorobenzene	5.60	0.17	0.50	ug/l	5.00		112 70-130	11	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2362 - EPA 524.2 (Continued)										
LCS Dup (W4B2362-BSD1)					Prepared & Analyzed: 02/28/24					
1,2,4-Trimethylbenzene	4.68	0.20	0.50	ug/l	5.00	94	70-130	4	30	
1,2-Dichloroethane	4.60	0.24	0.50	ug/l	5.00	92	70-130	5	30	
1,2-Dichloropropane	4.40	0.13	0.50	ug/l	5.00	88	70-130	3	30	
1,3,5-Trimethylbenzene	4.62	0.17	0.50	ug/l	5.00	92	70-130	3	30	
1,3-Dichloropropane	4.85	0.27	0.50	ug/l	5.00	97	70-130	7	30	
2,2-Dichloropropane	4.83	0.17	0.50	ug/l	5.00	97	70-130	3	30	
2-Butanone	4.31	1.5	5.0	ug/l	5.00	86	70-130	8	30	J
2-Chlorotoluene	4.96	0.15	0.50	ug/l	5.00	99	70-130	2	30	
2-Hexanone	4.78	1.2	5.0	ug/l	5.00	96	70-130	8	30	J
4-Chlorotoluene	4.96	0.15	0.50	ug/l	5.00	99	70-130	3	30	
4-Methyl-2-pentanone	4.83	1.8	5.0	ug/l	5.00	97	70-130	7	30	J
Acetone	45.7	3.1	5.0	ug/l	50.0	91	70-130	5	30	
Benzene	4.63	0.15	0.50	ug/l	5.00	93	70-130	4	30	
Bromobenzene	5.09	0.15	0.50	ug/l	5.00	102	70-130	3	30	
Bromochloromethane	4.39	0.15	0.50	ug/l	5.00	88	70-130	7	30	
Bromodichloromethane	4.51	0.24	0.50	ug/l	5.00	90	70-130	3	30	
Bromoform	5.30	0.38	0.50	ug/l	5.00	106	70-130	5	30	
Bromomethane	4.55	0.27	0.50	ug/l	5.00	91	70-130	3	30	
Carbon Disulfide	4.49	0.25	0.50	ug/l	5.00	90	70-130	2	30	
Carbon tetrachloride	4.76	0.27	0.50	ug/l	5.00	95	70-130	1	30	
Chlorobenzene	5.36	0.15	0.50	ug/l	5.00	107	70-130	7	30	
Chloroethane	4.45	0.17	0.50	ug/l	5.00	89	70-130	1	30	
Chloroform	4.61	0.27	0.50	ug/l	5.00	92	70-130	4	30	
Chloromethane	3.92	0.23	0.50	ug/l	5.00	78	70-130	4	30	
cis-1,2-Dichloroethene	4.47	0.25	0.50	ug/l	5.00	89	70-130	5	30	
cis-1,3-Dichloropropene	4.94	0.30	0.50	ug/l	5.00	99	70-130	9	30	
Dibromochloromethane	5.03	0.20	0.50	ug/l	5.00	101	70-130	6	30	
Dibromomethane	4.72	0.20	0.50	ug/l	5.00	94	70-130	5	30	
Dichlorodifluoromethane (Freon 12)	4.29	0.45	0.50	ug/l	5.00	86	70-130	0.2	30	
Di-isopropyl ether	17.5	1.1	2.0	ug/l	20.0	88	70-130	6	30	
Ethyl tert-butyl ether	19.2	1.0	2.0	ug/l	20.0	96	70-130	6	30	
Ethylbenzene	4.62	0.21	0.50	ug/l	5.00	92	70-130	4	30	
Freon 113	4.72	1.5	5.0	ug/l	5.00	94	70-130	4	30	J
Hexachlorobutadiene	5.35	0.40	0.50	ug/l	5.00	107	70-130	4	30	
Isopropylbenzene	4.62	0.18	0.50	ug/l	5.00	92	70-130	4	30	
m,p-Xylene	4.55	0.33	0.50	ug/l	5.00	91	70-130	1	30	
m-Dichlorobenzene	4.98	0.14	0.50	ug/l	5.00	100	70-130	5	30	
Methyl tert-butyl ether (MTBE)	19.6	0.94	2.0	ug/l	20.0	98	70-130	7	30	
Methylene chloride	4.21	0.30	0.50	ug/l	5.00	84	70-130	6	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2362 - EPA 524.2 (Continued)											
LCS Dup (W4B2362-BSD1)					Prepared & Analyzed: 02/28/24						
Naphthalene	4.89	0.35	0.50	ug/l	5.00		98	70-130	10	30	
n-Butylbenzene	4.75	0.29	0.50	ug/l	5.00		95	70-130	3	30	
n-Propylbenzene	4.47	0.18	0.50	ug/l	5.00		89	70-130	3	30	
o-Dichlorobenzene	4.95	0.19	0.50	ug/l	5.00		99	70-130	5	30	
o-Xylene	4.72	0.20	0.50	ug/l	5.00		94	70-130	6	30	
p-Dichlorobenzene	5.14	0.18	0.50	ug/l	5.00		103	70-130	4	30	
p-Isopropyltoluene	4.71	0.25	0.50	ug/l	5.00		94	70-130	4	30	
sec-Butylbenzene	4.59	0.24	0.50	ug/l	5.00		92	70-130	3	30	
Styrene	4.85	0.19	0.50	ug/l	5.00		97	70-130	4	30	
Tert-amyl methyl ether	19.8	0.59	2.0	ug/l	20.0		99	70-130	5	30	
tert-Butylbenzene	4.74	0.18	0.50	ug/l	5.00		95	70-130	5	30	
Tetrachloroethene	5.18	0.18	0.50	ug/l	5.00		104	70-130	2	30	
Toluene	4.69	0.29	0.50	ug/l	5.00		94	70-130	2	30	
trans-1,2-Dichloroethene	4.51	0.26	0.50	ug/l	5.00		90	70-130	6	30	
trans-1,3-Dichloropropene	5.09	0.32	0.50	ug/l	5.00		102	70-130	0.8	30	
Trichloroethene	4.85	0.18	0.50	ug/l	5.00		97	70-130	4	30	
Trichlorofluoromethane	4.73	0.18	0.50	ug/l	5.00		95	70-130	0.6	30	
Vinyl chloride	4.21	0.18	0.50	ug/l	5.00		84	70-130	1	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.4			ug/l	50.0		91	70-130			
4-Bromofluorobenzene	45.6			ug/l	50.0		91	70-130			

Batch: W4B2410 - EPA 524.2

Blank (W4B2410-BLK1)					Prepared & Analyzed: 02/29/24						
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)											
Blank (W4B2410-BLK1)						Prepared & Analyzed: 02/29/24					
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)											
Blank (W4B2410-BLK1)					Prepared & Analyzed: 02/29/24						
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.5			ug/l	50.0		81	70-130			
4-Bromofluorobenzene	41.9			ug/l	50.0		84	70-130			
LCS (W4B2410-BS1)					Prepared & Analyzed: 02/29/24						
1,1,1,2-Tetrachloroethane	4.77	0.24	0.50	ug/l	5.00		95	70-130			
1,1,1-Trichloroethane	4.55	0.26	0.50	ug/l	5.00		91	70-130			
1,1,2,2-Tetrachloroethane	4.31	0.20	0.50	ug/l	5.00		86	70-130			
1,1,2-Trichloroethane	4.44	0.19	0.50	ug/l	5.00		89	70-130			
1,1-Dichloroethane	4.25	0.27	0.50	ug/l	5.00		85	70-130			
1,1-Dichloroethene	4.20	0.16	0.50	ug/l	5.00		84	70-130			
1,1-Dichloropropene	4.27	0.14	0.50	ug/l	5.00		85	70-130			
1,2,3-Trichlorobenzene	5.08	0.40	0.50	ug/l	5.00		102	70-130			
1,2,3-Trichloropropane	4.74	0.22	0.50	ug/l	5.00		95	70-130			
1,2,4-Trichlorobenzene	5.31	0.17	0.50	ug/l	5.00		106	70-130			
1,2,4-Trimethylbenzene	4.57	0.20	0.50	ug/l	5.00		91	70-130			
1,2-Dichloroethane	4.28	0.24	0.50	ug/l	5.00		86	70-130			
1,2-Dichloropropane	4.10	0.13	0.50	ug/l	5.00		82	70-130			
1,3,5-Trimethylbenzene	4.51	0.17	0.50	ug/l	5.00		90	70-130			
1,3-Dichloropropane	4.42	0.27	0.50	ug/l	5.00		88	70-130			
2,2-Dichloropropane	5.07	0.17	0.50	ug/l	5.00		101	70-130			
2-Butanone	3.71	1.5	5.0	ug/l	5.00		74	70-130			J
2-Chlorotoluene	4.93	0.15	0.50	ug/l	5.00		99	70-130			
2-Hexanone	4.38	1.2	5.0	ug/l	5.00		88	70-130			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)									
LCS (W4B2410-BS1)					Prepared & Analyzed: 02/29/24				
4-Chlorotoluene	4.87	0.15	0.50	ug/l	5.00	97	70-130		
4-Methyl-2-pentanone	4.29	1.8	5.0	ug/l	5.00	86	70-130		J
Acetone	39.7	3.1	5.0	ug/l	50.0	79	70-130		
Benzene	4.37	0.15	0.50	ug/l	5.00	87	70-130		
Bromobenzene	4.85	0.15	0.50	ug/l	5.00	97	70-130		
Bromochloromethane	4.02	0.15	0.50	ug/l	5.00	80	70-130		
Bromodichloromethane	4.36	0.24	0.50	ug/l	5.00	87	70-130		
Bromoform	5.10	0.38	0.50	ug/l	5.00	102	70-130		
Bromomethane	4.39	0.27	0.50	ug/l	5.00	88	70-130		
Carbon Disulfide	4.23	0.25	0.50	ug/l	5.00	85	70-130		
Carbon tetrachloride	4.70	0.27	0.50	ug/l	5.00	94	70-130		
Chlorobenzene	4.90	0.15	0.50	ug/l	5.00	98	70-130		
Chloroethane	4.07	0.17	0.50	ug/l	5.00	81	70-130		
Chloroform	4.38	0.27	0.50	ug/l	5.00	88	70-130		
Chloromethane	3.73	0.23	0.50	ug/l	5.00	75	70-130		
cis-1,2-Dichloroethene	4.27	0.25	0.50	ug/l	5.00	85	70-130		
cis-1,3-Dichloropropene	4.50	0.30	0.50	ug/l	5.00	90	70-130		
Dibromochloromethane	4.76	0.20	0.50	ug/l	5.00	95	70-130		
Dibromomethane	4.50	0.20	0.50	ug/l	5.00	90	70-130		
Dichlorodifluoromethane (Freon 12)	4.18	0.45	0.50	ug/l	5.00	84	70-130		
Di-isopropyl ether	15.7	1.1	2.0	ug/l	20.0	79	70-130		
Ethyl tert-butyl ether	17.7	1.0	2.0	ug/l	20.0	88	70-130		
Ethylbenzene	4.37	0.21	0.50	ug/l	5.00	87	70-130		
Freon 113	4.54	1.5	5.0	ug/l	5.00	91	70-130		J
Hexachlorobutadiene	5.48	0.40	0.50	ug/l	5.00	110	70-130		
Isopropylbenzene	4.43	0.18	0.50	ug/l	5.00	89	70-130		
m,p-Xylene	4.38	0.33	0.50	ug/l	5.00	88	70-130		
m-Dichlorobenzene	4.92	0.14	0.50	ug/l	5.00	98	70-130		
Methyl tert-butyl ether (MTBE)	17.9	0.94	2.0	ug/l	20.0	90	70-130		
Methylene chloride	3.87	0.30	0.50	ug/l	5.00	77	70-130		
Naphthalene	4.60	0.35	0.50	ug/l	5.00	92	70-130		
n-Butylbenzene	4.73	0.29	0.50	ug/l	5.00	95	70-130		
n-Propylbenzene	4.38	0.18	0.50	ug/l	5.00	88	70-130		
o-Dichlorobenzene	4.82	0.19	0.50	ug/l	5.00	96	70-130		
o-Xylene	4.44	0.20	0.50	ug/l	5.00	89	70-130		
p-Dichlorobenzene	5.01	0.18	0.50	ug/l	5.00	100	70-130		
p-Isopropyltoluene	4.66	0.25	0.50	ug/l	5.00	93	70-130		
sec-Butylbenzene	4.52	0.24	0.50	ug/l	5.00	90	70-130		
Styrene	4.62	0.19	0.50	ug/l	5.00	92	70-130		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)										
LCS (W4B2410-BS1)					Prepared & Analyzed: 02/29/24					
Tert-amyl methyl ether	18.5	0.59	2.0	ug/l	20.0		92 70-130			
tert-Butylbenzene	4.57	0.18	0.50	ug/l	5.00		91 70-130			
Tetrachloroethene	4.98	0.18	0.50	ug/l	5.00		100 70-130			
Toluene	4.42	0.29	0.50	ug/l	5.00		88 70-130			
trans-1,2-Dichloroethene	4.24	0.26	0.50	ug/l	5.00		85 70-130			
trans-1,3-Dichloropropene	4.79	0.32	0.50	ug/l	5.00		96 70-130			
Trichloroethene	4.74	0.18	0.50	ug/l	5.00		95 70-130			
Trichlorofluoromethane	4.61	0.18	0.50	ug/l	5.00		92 70-130			
Vinyl chloride	3.95	0.18	0.50	ug/l	5.00		79 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0		93 70-130			
4-Bromofluorobenzene	46.2			ug/l	50.0		92 70-130			
LCS Dup (W4B2410-BSD1)					Prepared & Analyzed: 02/29/24					
1,1,1,2-Tetrachloroethane	4.74	0.24	0.50	ug/l	5.00		95 70-130	0.6	30	
1,1,1-Trichloroethane	4.54	0.26	0.50	ug/l	5.00		91 70-130	0.3	30	
1,1,2,2-Tetrachloroethane	4.42	0.20	0.50	ug/l	5.00		88 70-130	3	30	
1,1,2-Trichloroethane	4.51	0.19	0.50	ug/l	5.00		90 70-130	2	30	
1,1-Dichloroethane	4.37	0.27	0.50	ug/l	5.00		87 70-130	3	30	
1,1-Dichloroethene	4.17	0.16	0.50	ug/l	5.00		83 70-130	0.8	30	
1,1-Dichloropropene	4.24	0.14	0.50	ug/l	5.00		85 70-130	0.6	30	
1,2,3-Trichlorobenzene	5.22	0.40	0.50	ug/l	5.00		104 70-130	3	30	
1,2,3-Trichloropropane	4.83	0.22	0.50	ug/l	5.00		97 70-130	2	30	
1,2,4-Trichlorobenzene	5.69	0.17	0.50	ug/l	5.00		114 70-130	7	30	
1,2,4-Trimethylbenzene	4.47	0.20	0.50	ug/l	5.00		89 70-130	2	30	
1,2-Dichloroethane	4.47	0.24	0.50	ug/l	5.00		89 70-130	4	30	
1,2-Dichloropropane	4.22	0.13	0.50	ug/l	5.00		84 70-130	3	30	
1,3,5-Trimethylbenzene	4.38	0.17	0.50	ug/l	5.00		88 70-130	3	30	
1,3-Dichloropropane	4.64	0.27	0.50	ug/l	5.00		93 70-130	5	30	
2,2-Dichloropropane	5.02	0.17	0.50	ug/l	5.00		100 70-130	1	30	
2-Butanone	3.95	1.5	5.0	ug/l	5.00		79 70-130	6	30	J
2-Chlorotoluene	4.80	0.15	0.50	ug/l	5.00		96 70-130	3	30	
2-Hexanone	4.53	1.2	5.0	ug/l	5.00		91 70-130	3	30	J
4-Chlorotoluene	4.77	0.15	0.50	ug/l	5.00		95 70-130	2	30	
4-Methyl-2-pentanone	4.59	1.8	5.0	ug/l	5.00		92 70-130	7	30	J
Acetone	42.6	3.1	5.0	ug/l	50.0		85 70-130	7	30	
Benzene	4.48	0.15	0.50	ug/l	5.00		90 70-130	2	30	
Bromobenzene	4.94	0.15	0.50	ug/l	5.00		99 70-130	2	30	
Bromochloromethane	4.21	0.15	0.50	ug/l	5.00		84 70-130	5	30	
Bromodichloromethane	4.37	0.24	0.50	ug/l	5.00		87 70-130	0.3	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)										
LCS Dup (W4B2410-BSD1)					Prepared & Analyzed: 02/29/24					
Bromoform	5.27	0.38	0.50	ug/l	5.00	105	70-130	3	30	
Bromomethane	4.48	0.27	0.50	ug/l	5.00	90	70-130	2	30	
Carbon Disulfide	4.26	0.25	0.50	ug/l	5.00	85	70-130	0.6	30	
Carbon tetrachloride	4.64	0.27	0.50	ug/l	5.00	93	70-130	1	30	
Chlorobenzene	5.20	0.15	0.50	ug/l	5.00	104	70-130	6	30	
Chloroethane	4.10	0.17	0.50	ug/l	5.00	82	70-130	0.9	30	
Chloroform	4.42	0.27	0.50	ug/l	5.00	88	70-130	1	30	
Chloromethane	3.72	0.23	0.50	ug/l	5.00	74	70-130	0.3	30	
cis-1,2-Dichloroethene	4.32	0.25	0.50	ug/l	5.00	86	70-130	1	30	
cis-1,3-Dichloropropene	4.54	0.30	0.50	ug/l	5.00	91	70-130	0.9	30	
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00	99	70-130	4	30	
Dibromomethane	4.60	0.20	0.50	ug/l	5.00	92	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	4.14	0.45	0.50	ug/l	5.00	83	70-130	1	30	
Di-isopropyl ether	16.6	1.1	2.0	ug/l	20.0	83	70-130	6	30	
Ethyl tert-butyl ether	18.6	1.0	2.0	ug/l	20.0	93	70-130	5	30	
Ethylbenzene	4.37	0.21	0.50	ug/l	5.00	87	70-130	0.1	30	
Freon 113	4.50	1.5	5.0	ug/l	5.00	90	70-130	0.9	30	J
Hexachlorobutadiene	5.30	0.40	0.50	ug/l	5.00	106	70-130	3	30	
Isopropylbenzene	4.41	0.18	0.50	ug/l	5.00	88	70-130	0.5	30	
m,p-Xylene	4.34	0.33	0.50	ug/l	5.00	87	70-130	1	30	
m-Dichlorobenzene	4.86	0.14	0.50	ug/l	5.00	97	70-130	1	30	
Methyl tert-butyl ether (MTBE)	19.0	0.94	2.0	ug/l	20.0	95	70-130	6	30	
Methylene chloride	4.03	0.30	0.50	ug/l	5.00	81	70-130	4	30	
Naphthalene	4.96	0.35	0.50	ug/l	5.00	99	70-130	8	30	
n-Butylbenzene	4.61	0.29	0.50	ug/l	5.00	92	70-130	3	30	
n-Propylbenzene	4.25	0.18	0.50	ug/l	5.00	85	70-130	3	30	
o-Dichlorobenzene	4.80	0.19	0.50	ug/l	5.00	96	70-130	0.5	30	
o-Xylene	4.55	0.20	0.50	ug/l	5.00	91	70-130	2	30	
p-Dichlorobenzene	4.99	0.18	0.50	ug/l	5.00	100	70-130	0.5	30	
p-Isopropyltoluene	4.51	0.25	0.50	ug/l	5.00	90	70-130	3	30	
sec-Butylbenzene	4.36	0.24	0.50	ug/l	5.00	87	70-130	4	30	
Styrene	4.64	0.19	0.50	ug/l	5.00	93	70-130	0.6	30	
Tert-amyl methyl ether	19.2	0.59	2.0	ug/l	20.0	96	70-130	4	30	
tert-Butylbenzene	4.48	0.18	0.50	ug/l	5.00	90	70-130	2	30	
Tetrachloroethene	5.03	0.18	0.50	ug/l	5.00	101	70-130	1	30	
Toluene	4.48	0.29	0.50	ug/l	5.00	90	70-130	2	30	
trans-1,2-Dichloroethene	4.29	0.26	0.50	ug/l	5.00	86	70-130	1	30	
trans-1,3-Dichloropropene	4.97	0.32	0.50	ug/l	5.00	99	70-130	4	30	
Trichloroethene	4.71	0.18	0.50	ug/l	5.00	94	70-130	0.5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)											
LCS Dup (W4B2410-BSD1)											
Prepared & Analyzed: 02/29/24											
Trichlorofluoromethane	4.51	0.18	0.50	ug/l	5.00		90	70-130	2	30	
Vinyl chloride	3.98	0.18	0.50	ug/l	5.00		80	70-130	0.8	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	45.3			ug/l	50.0		91	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:43

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B16032

Report Date: 4/04/2024

Received Date: 2/15/2024

Project: City of Santa Monica - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

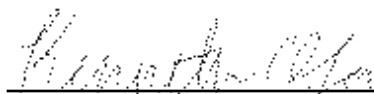
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/15/24 with the Chain-of-Custody document. The samples were received in good condition, at 2.2 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-4-54	Earl Garcia	4B16032-01	Water	02/15/24 09:25	
AT-GS-4-57	Earl Garcia	4B16032-02	Water	02/15/24 11:00	
AT-RES-4-522	Earl Garcia	4B16032-03	Water	02/15/24 11:45	
AT-RES-3-522	Earl Garcia	4B16032-06	Water	02/15/24 15:20	
AT-GS-3-57	Earl Garcia	4B16032-07	Water	02/15/24 14:35	
AT-GS-3-57	Earl Garcia	4B16032-08	Water	02/15/24 14:50	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16032-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.26	0.0090	0.10	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/14/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1365	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 18:44		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/15/24 19:33	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	0.49	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	5.4	0.040	0.20	mg/l	1	02/16/24 17:50	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 17:50	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.27	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	330	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	400	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.131	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	0.642	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16032-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CAPP, Calcium Carbonate Precip. Pot.	25.6	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	900	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.07	0.10	0.10	pH Units	1	02/16/24 17:39	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	528	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7							
Batch ID: W4B1958	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	140	1.3	10	ug/l	1	02/26/24	
Calcium, Total	120	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	55.5	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	40	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8							
Batch ID: W4B1962	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.69	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	56	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	12	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	14	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	2.5	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	3.9	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	110	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	570	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16032-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2336		Preparation: EPA 200.2		Prepared: 02/29/24 11:14		Analyst: tyc	
Iron, Total	21	3.9	20	ug/l	1	03/01/24	

Microbiological Parameters by Standard Methods

Method: SM 9215E			Instr: INC06				
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	O-09
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16032-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477		Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM	
Sulfate as SO4	230	0.72	1.5	mg/l	3	02/19/24	M-06

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16032-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	140	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.30	0.0090	0.10	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	12.7			AGI	1	03/14/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1365	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 18:44		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/15/24 19:33	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	0.49	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.42	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	0.85	0.040	0.20	mg/l	1	02/16/24 17:52	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 17:52	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.22	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	350	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	430	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.775	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	1.28	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16032-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	80.2	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	1100	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.59	0.10	0.10	pH Units	1	02/16/24 17:42	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	672	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7							
Batch ID: W4B1958	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	230	1.3	10	ug/l	1	02/26/24	
Calcium, Total	160	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	65.9	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	43	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	43	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8							
Batch ID: W4B1962	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.86	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	57	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	2.2	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	3.2	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	2.1	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	100	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	870	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16032-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2336		Preparation: EPA 200.2			Prepared: 02/29/24 11:14		Analyst: tyc
Iron, Total	6.8	3.9	20	ug/l	1	03/01/24	J

Microbiological Parameters by Standard Methods

Method: SM 9215E			Instr: INC06				
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)			Prepared: 02/15/24 19:40		Analyst: rea
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	O-15
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)			Prepared: 02/15/24 20:40		Analyst: rea
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16032-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477		Preparation: _NONE (LC)			Prepared: 02/18/24 11:58		Analyst: CAM
Sulfate as SO4	330	0.96	2.0	mg/l	4	02/19/24	M-06

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:45 by Earl Garcia

4B16032-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477		Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM	
Chloride, Total	24	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.75	0.0090	0.10	mg/l	1	02/18/24	
Sulfate as SO4	46	0.24	0.50	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1045		Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln	
Aggressive Index	11.4			AGI	1	03/14/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1365		Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 18:44		Analyst: rob	
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/15/24 19:33	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0794		Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT	
Ammonia as N	0.78	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0696		Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT	
TKN	0.69	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1446		Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM	
Nitrate as N	0.34	0.040	0.20	mg/l	1	02/16/24 17:53	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 17:53	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0522		Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob	
Phosphorus as PO4, Total	0.040	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1421		Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac	
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508		Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes	
Alkalinity as CaCO3	63	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO3	77	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959		Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln	
Langelier Index @ 20 C	-0.403	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:45 by Earl Garcia

4B16032-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)			Prepared: 03/12/24 16:29			Analyst: aln
Langelier Index @ 60 C	0.120	-20.0	-10.0	LSI	1	03/13/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)			Prepared: 03/14/24 11:12			Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	-2.63	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)			Prepared: 02/20/24 12:32			Analyst: bel
Total Dissolved Solids	150	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)			Prepared: 02/16/24 16:41			Analyst: mes
pH	7.86	0.10	0.10	pH Units	1	02/16/24 17:44	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 02/23/24 09:40			Analyst: kvm
Hardness as CaCO3, Total	84.3	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B1958	Preparation: EPA 200.2			Prepared: 02/23/24 09:40			Analyst: kvm
Boron, Total	130	1.3	10	ug/l	1	02/26/24	
Calcium, Total	20.2	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	8.23	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	6.2	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	6.2	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1962	Preparation: EPA 200.2			Prepared: 02/23/24 13:18			Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.21	0.074	0.40	ug/l	1	02/26/24	J
Barium, Total	7.2	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	0.57	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	0.31	0.067	0.40	ug/l	1	02/26/24	J
Sodium, Total	26	0.10	1.0	mg/l	1	02/26/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:45 by Earl Garcia

4B16032-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B1962		Preparation: EPA 200.2		Prepared: 02/23/24 13:18		Analyst: tyc	
Strontium, Total	97	0.036	0.20	ug/l	1	02/26/24	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:20 by Earl Garcia

4B16032-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	30	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.75	0.0090	0.10	mg/l	1	02/18/24	
Sulfate as SO4	62	0.24	0.50	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/14/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1365	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 18:44		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/15/24 19:33	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	1.1	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	1.0	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	0.46	0.040	0.20	mg/l	1	02/16/24 17:54	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 17:54	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO4, Total	0.051	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO3	84	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO3	100	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.272	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:20 by Earl Garcia

4B16032-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 60 C	0.789	-20.0	-10.0	LSI	1	03/13/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)		Prepared: 03/14/24 11:12		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	2.41	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 12:32		Analyst: bel		
Total Dissolved Solids	190	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 16:41		Analyst: mes		
pH	8.29	0.10	0.10	pH Units	1	02/16/24 17:47	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/23/24 09:40		Analyst: kvm		
Hardness as CaCO3, Total	116	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B1958	Preparation: EPA 200.2		Prepared: 02/23/24 09:40		Analyst: kvm		
Boron, Total	120	1.3	10	ug/l	1	02/26/24	
Calcium, Total	27.7	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	11.4	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	8.4	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	8.5	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1962	Preparation: EPA 200.2		Prepared: 02/23/24 13:18		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.25	0.074	0.40	ug/l	1	02/26/24	J
Barium, Total	10	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	0.73	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	0.40	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	31	0.10	1.0	mg/l	1	02/26/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:20 by Earl Garcia

4B16032-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B1962		Preparation: EPA 200.2		Prepared: 02/23/24 13:18		Analyst: tyc	
Strontium, Total	130	0.036	0.20	ug/l	1	02/26/24	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16032-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	140	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.30	0.0090	0.10	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	12.7			AGI	1	03/14/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1429	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:21		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/16/24 13:44	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	0.38	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.35	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	0.67	0.040	0.20	mg/l	1	02/16/24 18:00	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 18:00	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.20	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	340	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	420	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.704	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	1.21	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16032-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	73.7	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	1100	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.54	0.10	0.10	pH Units	1	02/16/24 17:49	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	659	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7							
Batch ID: W4B1958	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	220	1.3	10	ug/l	1	02/26/24	
Calcium, Total	157	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	64.8	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	43	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	43	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8							
Batch ID: W4B1962	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.76	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	57	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	2.0	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	3.2	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	1.7	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	100	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	850	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16032-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2336		Preparation: EPA 200.2		Prepared: 02/29/24 11:14		Analyst: tyc	
Iron, Total	4.2	3.9	20	ug/l	1	03/01/24	J

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16032-07RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477		Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM	
Sulfate as SO4	330	0.96	2.0	mg/l	4	02/19/24	M-06

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:50 by Earl Garcia

4B16032-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Sample Results BSK Associates Laboratory Fresno

Sample: AT-GS-4-54
 4B16032-01 (Water)

Sampled: 02/15/24 9:25 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	88		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	93%		90-115			03/06/24	HT1.0
Dichloroacetate	93%		90-115			03/06/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.62		0.010	mg/L	1	03/01/24	

Sample: AT-GS-4-57
 4B16032-02 (Water)

Sampled: 02/15/24 11:00 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	380		25	ug/L	5	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	95%		90-115			03/06/24	HT1.0
Dichloroacetate	103%		90-115			03/06/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0							
Bromide	1.1		0.020	mg/L	2	03/04/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Sample Results (Continued)

Sample: AT-RES-4-522
 4B16032-03 (Water) Sampled: 02/15/24 11:45 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0219		Prepared: 03/06/24 04:54			Analyst: DXR	
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	170		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	102%		90-115			03/06/24	HT1.0
Dichloroacetate	102%		90-115			03/06/24	

Method: EPA 317.0	Batch ID: AHC0136		Prepared: 03/08/24 15:42			Analyst: DXR	
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0	Batch ID: AHC0060		Prepared: 03/01/24 16:00			Analyst: AAS	
Bromide	0.58		0.010	mg/L	1	03/01/24	

Sample: AT-RES-3-522
 4B16032-06 (Water) Sampled: 02/15/24 15:20 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0219		Prepared: 03/06/24 05:22			Analyst: DXR	
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	190		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	100%		90-115			03/06/24	HT1.0
Dichloroacetate	100%		90-115			03/06/24	

Method: EPA 317.0	Batch ID: AHC0136		Prepared: 03/08/24 15:54			Analyst: DXR	
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0	Batch ID: AHC0060		Prepared: 03/01/24 16:00			Analyst: AAS	
Bromide	0.53		0.010	mg/L	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Sample Results (Continued)

Sample: AT-GS-3-57
 4B16032-07 (Water) Sampled: 02/15/24 14:35 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0219		Prepared: 03/06/24 05:50		Analyst: DXR		
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	380		25	ug/L	5	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	100%		90-115			03/06/24	HT1.0
Dichloroacetate	102%		90-115			03/06/24	
Method: EPA 317.0	Batch ID: AHC0136		Prepared: 03/07/24 19:27		Analyst: DXR		
Bromate	ND		1.0	ug/L	1	03/07/24	
General Chemistry							
Method: EPA 300.0	Batch ID: AHC0152		Prepared: 03/04/24 16:26		Analyst: AAS		
Bromide	1.1		0.020	mg/L	2	03/04/24	MS1.2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0136 - EPA 317.0										
Blank (AHC0136-BLK1) Prepared & Analyzed: 03/08/24										
Bromate	ND	1.0	ug/L							
LCS (AHC0136-BS1) Prepared & Analyzed: 03/08/24										
Bromate	10	1.0	ug/L	10.0		103	85-115			
LCS Dup (AHC0136-BSD1) Prepared & Analyzed: 03/08/24										
Bromate	10	1.0	ug/L	10.0		103	85-115	0	10	
Matrix Spike (AHC0136-MS1) Source: AHC0050-02 Prepared & Analyzed: 03/08/24										
Bromate	9.2	1.0	ug/L	10.0	ND	92	75-125			
Matrix Spike Dup (AHC0136-MSD1) Source: AHC0050-02 Prepared & Analyzed: 03/08/24										
Bromate	9.1	1.0	ug/L	10.0	ND	91	75-125	1	10	
Batch: AHC0219 - EPA 300.1										
Blank (AHC0219-BLK1) Prepared & Analyzed: 03/05/24										
Chlorate	ND	5.0	ug/L							
Chlorite	ND	0.0050	mg/L							
<i>Surrogate(s)</i>										
Dichloroacetate	0.508		mg/L	0.500		102	90-115			
Dichloroacetate	508		ug/L	500		102	90-115			
LCS (AHC0219-BS1) Prepared & Analyzed: 03/05/24										
Chlorate	200	5.0	ug/L	200		100	85-115			
Chlorite	0.21	0.0050	mg/L	0.200		105	85-115			
<i>Surrogate(s)</i>										
Dichloroacetate	0.512		mg/L	0.500		102	90-115			
Dichloroacetate	512		ug/L	500		102	90-115			
LCS Dup (AHC0219-BSD1) Prepared & Analyzed: 03/05/24										
Chlorate	200	5.0	ug/L	200		100	85-115	0.1	10	
Chlorite	0.21	0.0050	mg/L	0.200		103	85-115	2	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.525		mg/L	0.500		105	90-115			
Dichloroacetate	525		ug/L	500		105	90-115			
Matrix Spike (AHC0219-MS1) Source: AHB3420-01 Prepared & Analyzed: 03/05/24										
Chlorate	100	5.0	ug/L	100	ND	104	75-125			
Chlorite	0.10	0.0050	mg/L	0.100	ND	104	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.549		mg/L	0.500		110	90-115			
Dichloroacetate	549		ug/L	500		110	90-115			
Matrix Spike (AHC0219-MS2) Source: AHC0050-01 Prepared & Analyzed: 03/06/24										
Chlorate	100	5.0	ug/L	100	ND	105	75-125			
Chlorite	0.097	0.0050	mg/L	0.100	ND	97	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.521		mg/L	0.500		104	90-115			
Dichloroacetate	521		ug/L	500		104	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0219 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0219-MSD1)			Source: AHB3420-01		Prepared & Analyzed: 03/05/24					
Chlorate	99	5.0	ug/L	100	ND	99	75-125	5	10	
Chlorite	0.10	0.0050	mg/L	0.100	ND	105	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.555		mg/L	0.500		111	90-115			
Dichloroacetate	555		ug/L	500		111	90-115			
Matrix Spike Dup (AHC0219-MSD2)			Source: AHC0050-01		Prepared & Analyzed: 03/06/24					
Chlorate	100	5.0	ug/L	100	ND	104	75-125	0.9	10	
Chlorite	0.096	0.0050	mg/L	0.100	ND	96	75-125	1	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.509		mg/L	0.500		102	90-115			
Dichloroacetate	509		ug/L	500		102	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0060 - EPA 300.0										
Blank (AHC0060-BLK1)			Prepared & Analyzed: 03/01/24							
Bromide	ND	0.010	mg/L							
LCS (AHC0060-BS1)			Prepared & Analyzed: 03/01/24							
Bromide	0.19	0.010	mg/L	0.200		96	90-110			
Matrix Spike (AHC0060-MS1)			Source: AHB3708-01		Prepared & Analyzed: 03/01/24					
Bromide	0.096	0.010	mg/L	0.100	ND	96	80-120			
Matrix Spike (AHC0060-MS2)			Source: AHC0055-03		Prepared & Analyzed: 03/01/24					
Bromide	0.40	0.010	mg/L	0.100	0.34	60	80-120			MS1.0
Matrix Spike Dup (AHC0060-MSD1)			Source: AHB3708-01		Prepared & Analyzed: 03/01/24					
Bromide	0.097	0.010	mg/L	0.100	ND	97	80-120	1	10	
Matrix Spike Dup (AHC0060-MSD2)			Source: AHC0055-03		Prepared & Analyzed: 03/01/24					
Bromide	0.41	0.010	mg/L	0.100	0.34	69	80-120	2	10	MS1.0
Batch: AHC0152 - EPA 300.0										
Blank (AHC0152-BLK1)			Prepared & Analyzed: 03/04/24							
Bromide	ND	0.010	mg/L							
LCS (AHC0152-BS1)			Prepared & Analyzed: 03/04/24							
Bromide	0.19	0.010	mg/L	0.200		95	90-110			
Matrix Spike (AHC0152-MS1)			Source: AHC0045-05RE1		Prepared & Analyzed: 03/04/24					
Bromide	1.2	0.020	mg/L	0.200	1.1	44	80-120			MS1.0
Matrix Spike Dup (AHC0152-MSD1)			Source: AHC0045-05RE1		Prepared & Analyzed: 03/04/24					
Bromide	1.2	0.020	mg/L	0.200	1.1	49	80-120	0.9	10	MS1.0

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1477 - EPA 300.0											
Blank (W4B1477-BLK1)					Prepared & Analyzed: 02/18/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1477-BS1)					Prepared & Analyzed: 02/18/24						
Chloride, Total	20.2	0.19	0.50	mg/l	20.0		101	90-110			
Fluoride, Total	1.90	0.0090	0.10	mg/l	2.00		95	90-110			
Sulfate as SO4	19.6	0.24	0.50	mg/l	20.0		98	90-110			
Matrix Spike (W4B1477-MS1)					Source: 4B12018-01		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	384	1.9	5.0	mg/l	200	155	115	76-118			
Fluoride, Total	20.4	0.090	1.0	mg/l	20.0	0.197	101	86-107			
Sulfate as SO4	1070	2.4	5.0	mg/l	200	565	252	78-111			MS-01
Matrix Spike (W4B1477-MS2)					Source: 4B12018-02		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	387	1.9	5.0	mg/l	200	159	114	76-118			
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.189	100	86-107			
Sulfate as SO4	879	2.4	5.0	mg/l	200	467	206	78-111			MS-01
Matrix Spike Dup (W4B1477-MSD1)					Source: 4B12018-01		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	383	1.9	5.0	mg/l	200	155	114	76-118	0.3	20	
Fluoride, Total	20.4	0.090	1.0	mg/l	20.0	0.197	101	86-107	0.1	20	
Sulfate as SO4	1070	2.4	5.0	mg/l	200	565	251	78-111	0.2	20	MS-01
Matrix Spike Dup (W4B1477-MSD2)					Source: 4B12018-02		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	386	1.9	5.0	mg/l	200	159	113	76-118	0.3	20	
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.189	100	86-107	0.1	20	
Sulfate as SO4	877	2.4	5.0	mg/l	200	467	205	78-111	0.2	20	MS-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1365 - EPA 140.1										
Blank (W4B1365-BLK1) Prepared & Analyzed: 02/15/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1365-DUP1) Source: 4B15126-01 Prepared & Analyzed: 02/15/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Duplicate (W4B1365-DUP2) Source: 4B16032-06 Prepared & Analyzed: 02/15/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1421 - SM 2120B										
LCS (W4B1421-BS1) Prepared & Analyzed: 02/16/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1421-DUP1) Source: 4B16032-07 Prepared & Analyzed: 02/16/24										
Color	ND		3.0	Color Units		ND			10	
Batch: W4B1429 - EPA 140.1										
Blank (W4B1429-BLK1) Prepared & Analyzed: 02/16/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1429-DUP1) Source: 4B16032-07 Prepared & Analyzed: 02/16/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1446 - EPA 353.2										
Blank (W4B1446-BLK1) Prepared & Analyzed: 02/16/24										
Nitrate as N	ND	0.040	0.20	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B1446-BS1) Prepared & Analyzed: 02/16/24										
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101 90-110			
Nitrite as N	1040	42	100	ug/l	1000		104 90-110			
Matrix Spike (W4B1446-MS1) Source: 4B01037-10 Prepared & Analyzed: 02/16/24										
Nitrate as N	2.29	0.040	0.20	mg/l	2.00	0.311	99 90-110			
Nitrite as N	1040	42	100	ug/l	1000	ND	104 90-110			
Matrix Spike (W4B1446-MS2) Source: 4B15128-01 Prepared & Analyzed: 02/16/24										
Nitrate as N	2.56	0.040	0.20	mg/l	2.00	0.529	102 90-110			
Nitrite as N	1090	42	100	ug/l	1000	ND	109 90-110			
Matrix Spike Dup (W4B1446-MSD1) Source: 4B01037-10 Prepared & Analyzed: 02/16/24										
Nitrate as N	2.28	0.040	0.20	mg/l	2.00	0.311	98 90-110	0.4	20	
Nitrite as N	1030	42	100	ug/l	1000	ND	103 90-110	1	20	
Matrix Spike Dup (W4B1446-MSD2) Source: 4B15128-01 Prepared & Analyzed: 02/16/24										
Nitrate as N	2.58	0.040	0.20	mg/l	2.00	0.529	103 90-110	0.8	20	
Nitrite as N	1090	42	100	ug/l	1000	ND	109 90-110	0	20	
Batch: W4B1456 - SM 4500H+-B										
LCS (W4B1456-BS1) Prepared & Analyzed: 02/16/24										
pH	6.93	0.10	0.10	pH Units	6.86		101 98.8-101			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1456 - SM 4500H+-B (Continued)										
Duplicate (W4B1456-DUP1)	Source: 4B01037-01			Prepared & Analyzed: 02/16/24						
pH	7.17	0.10	0.10	pH Units		7.07		1	3.1	
Batch: W4B1508 - SM 2320B										
Blank (W4B1508-BLK1)	Prepared & Analyzed: 02/20/24									
Alkalinity as CaCO3	ND	7.2	20	mg/l						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l						
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l						
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l						
LCS (W4B1508-BS1)	Prepared & Analyzed: 02/20/24									
Alkalinity as CaCO3	89.1	7.2	20	mg/l	87.8		101 94-108			
Bicarbonate Alkalinity as HCO3	109	8.8	24	mg/l	107		101 95-108			
Duplicate (W4B1508-DUP1)	Source: 4B01037-01			Prepared & Analyzed: 02/20/24						
Alkalinity as CaCO3	333	7.2	20	mg/l		335		0.6	15	
Bicarbonate Alkalinity as HCO3	406	8.8	24	mg/l		408		0.6	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND			200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND			200	
Batch: W4B1515 - SM 2540C										
Blank (W4B1515-BLK1)	Prepared & Analyzed: 02/20/24									
Total Dissolved Solids	ND	4.0	10	mg/l						
LCS (W4B1515-BS1)	Prepared & Analyzed: 02/20/24									
Total Dissolved Solids	801	4.0	10	mg/l	824		97 97-103			
Duplicate (W4B1515-DUP1)	Source: 4B15148-01			Prepared & Analyzed: 02/20/24						
Total Dissolved Solids	12300	4.0	10	mg/l		12400		1	10	
Duplicate (W4B1515-DUP2)	Source: 4B16032-07			Prepared & Analyzed: 02/20/24						
Total Dissolved Solids	1050	4.0	10	mg/l		1070		2	10	
Batch: W4C0522 - EPA 365.3										
Blank (W4C0522-BLK1)	Prepared: 03/07/24 Analyzed: 03/11/24									
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l						
LCS (W4C0522-BS1)	Prepared: 03/07/24 Analyzed: 03/11/24									
Phosphorus as PO4, Total	0.592	0.021	0.030	mg/l	0.612		97 90-110			
Matrix Spike (W4C0522-MS1)	Source: 4B15058-07			Prepared: 03/07/24 Analyzed: 03/11/24						
Phosphorus as PO4, Total	0.611	0.021	0.030	mg/l	0.612	ND	100 90-110			
Matrix Spike Dup (W4C0522-MSD1)	Source: 4B15058-07			Prepared: 03/07/24 Analyzed: 03/11/24						
Phosphorus as PO4, Total	0.501	0.021	0.030	mg/l	0.612	ND	82 90-110	20	20	MS-01
Batch: W4C0696 - EPA 351.2										
Blank (W4C0696-BLK1)	Prepared: 03/08/24 Analyzed: 03/11/24									
TKN	ND	0.065	0.10	mg/l						
Blank (W4C0696-BLK2)	Prepared: 03/08/24 Analyzed: 03/11/24									

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier	
Batch: W4C0696 - EPA 351.2 (Continued)										
Blank (W4C0696-BLK2)										
TKN	ND	0.065	0.10	mg/l						
					Prepared: 03/08/24 Analyzed: 03/11/24					
LCS (W4C0696-BS1)										
TKN	0.964	0.065	0.10	mg/l	1.00		96 90-110			
					Prepared: 03/08/24 Analyzed: 03/11/24					
LCS (W4C0696-BS2)										
TKN	0.943	0.065	0.10	mg/l	1.00		94 90-110			
					Prepared: 03/08/24 Analyzed: 03/11/24					
Matrix Spike (W4C0696-MS1)										
TKN	1.47	0.065	0.10	mg/l	1.00	0.459	101 90-110			
					Source: 4B16076-04 Prepared: 03/08/24 Analyzed: 03/11/24					
Matrix Spike (W4C0696-MS2)										
TKN	2.27	0.065	0.10	mg/l	1.00	1.45	82 90-110			MS-02
					Source: 4B16076-05 Prepared: 03/08/24 Analyzed: 03/11/24					
Matrix Spike Dup (W4C0696-MSD1)										
TKN	1.45	0.065	0.10	mg/l	1.00	0.459	100 90-110	0.9	10	
					Source: 4B16076-04 Prepared: 03/08/24 Analyzed: 03/11/24					
Matrix Spike Dup (W4C0696-MSD2)										
TKN	2.24	0.065	0.10	mg/l	1.00	1.45	79 90-110	1	10	MS-02
					Source: 4B16076-05 Prepared: 03/08/24 Analyzed: 03/11/24					
Batch: W4C0794 - EPA 350.1										
Blank (W4C0794-BLK1)										
Ammonia as N	ND	0.017	0.10	mg/l						
					Prepared: 03/11/24 Analyzed: 03/12/24					
Blank (W4C0794-BLK2)										
Ammonia as N	ND	0.017	0.10	mg/l						
					Prepared: 03/11/24 Analyzed: 03/12/24					
LCS (W4C0794-BS1)										
Ammonia as N	0.244	0.017	0.10	mg/l	0.250		97 90-110			
					Prepared: 03/11/24 Analyzed: 03/12/24					
LCS (W4C0794-BS2)										
Ammonia as N	0.253	0.017	0.10	mg/l	0.250		101 90-110			
					Prepared: 03/11/24 Analyzed: 03/12/24					
Matrix Spike (W4C0794-MS1)										
Ammonia as N	0.261	0.017	0.10	mg/l	0.250	0.0237	95 90-110			
					Source: 4B01037-01 Prepared: 03/11/24 Analyzed: 03/12/24					
Matrix Spike (W4C0794-MS2)										
Ammonia as N	1.02	0.017	0.10	mg/l	0.250	0.784	94 90-110			
					Source: 4B16032-03 Prepared: 03/11/24 Analyzed: 03/12/24					
Matrix Spike Dup (W4C0794-MSD1)										
Ammonia as N	0.262	0.017	0.10	mg/l	0.250	0.0237	95 90-110	0.4	15	
					Source: 4B01037-01 Prepared: 03/11/24 Analyzed: 03/12/24					
Matrix Spike Dup (W4C0794-MSD2)										
Ammonia as N	1.02	0.017	0.10	mg/l	0.250	0.784	93 90-110	0.3	15	
					Source: 4B16032-03 Prepared: 03/11/24 Analyzed: 03/12/24					

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier	
Batch: W4B1958 - EPA 200.7										
Blank (W4B1958-BLK1)					Prepared: 02/23/24 Analyzed: 02/26/24					
Boron, Total	ND	1.3	10	ug/l						
Calcium, Total	ND	0.0240	0.500	mg/l						
Magnesium, Total	ND	0.0148	0.500	mg/l						
Silica as SiO ₂ , Dissolved	0.0169	0.0086	0.10	mg/l					J	
Silica as SiO ₂ , Total	0.0185	0.0086	0.10	mg/l					J	
LCS (W4B1958-BS1)					Prepared: 02/23/24 Analyzed: 02/26/24					
Boron, Total	226	1.3	10	ug/l	200		113 85-115			
Calcium, Total	50.9	0.0240	0.500	mg/l	50.2		101 85-115			
Magnesium, Total	50.7	0.0148	0.500	mg/l	50.2		101 85-115			
Silica as SiO ₂ , Dissolved	46.6	0.0086	0.10	mg/l	43.2		108 85-115			
Silica as SiO ₂ , Total	46.6	0.0086	0.10	mg/l	43.2		108 85-115			
Matrix Spike (W4B1958-MS1)					Source: 4B14107-01 Prepared: 02/23/24 Analyzed: 02/26/24					
Boron, Total	777	1.3	10	ug/l	200	545	116 70-130			
Calcium, Total	117	0.0240	0.500	mg/l	50.2	69.4	96 70-130			
Magnesium, Total	65.8	0.0148	0.500	mg/l	50.2	15.6	100 70-130			
Silica as SiO ₂ , Dissolved	70.2	0.0086	0.10	mg/l	43.2	24.2	107 70-130			
Silica as SiO ₂ , Total	70.2	0.0086	0.10	mg/l	43.2	24.0	107 70-130			
Matrix Spike (W4B1958-MS2)					Source: 4B14142-01 Prepared: 02/23/24 Analyzed: 02/26/24					
Boron, Total	371	1.3	10	ug/l	200	140	116 70-130			
Calcium, Total	168	0.0240	0.500	mg/l	50.2	120	96 70-130			
Magnesium, Total	106	0.0148	0.500	mg/l	50.2	55.7	100 70-130			
Silica as SiO ₂ , Dissolved	86.5	0.0086	0.10	mg/l	43.2	39.8	108 70-130			
Silica as SiO ₂ , Total	86.5	0.0086	0.10	mg/l	43.2	40.1	107 70-130			
Matrix Spike Dup (W4B1958-MSD1)					Source: 4B14107-01 Prepared: 02/23/24 Analyzed: 02/26/24					
Boron, Total	783	1.3	10	ug/l	200	545	119 70-130	0.7	30	
Calcium, Total	119	0.0240	0.500	mg/l	50.2	69.4	99 70-130	1	30	
Magnesium, Total	66.7	0.0148	0.500	mg/l	50.2	15.6	102 70-130	1	30	
Silica as SiO ₂ , Dissolved	70.9	0.0086	0.10	mg/l	43.2	24.2	108 70-130	0.9	30	
Silica as SiO ₂ , Total	70.9	0.0086	0.10	mg/l	43.2	24.0	108 70-130	0.9	30	
Matrix Spike Dup (W4B1958-MSD2)					Source: 4B14142-01 Prepared: 02/23/24 Analyzed: 02/26/24					
Boron, Total	371	1.3	10	ug/l	200	140	116 70-130	0.06	30	
Calcium, Total	168	0.0240	0.500	mg/l	50.2	120	96 70-130	0.04	30	
Magnesium, Total	106	0.0148	0.500	mg/l	50.2	55.7	100 70-130	0.1	30	
Silica as SiO ₂ , Dissolved	86.9	0.0086	0.10	mg/l	43.2	39.8	109 70-130	0.4	30	
Silica as SiO ₂ , Total	86.9	0.0086	0.10	mg/l	43.2	40.1	108 70-130	0.4	30	
Batch: W4B1962 - EPA 200.8										
Blank (W4B1962-BLK1)					Prepared: 02/23/24 Analyzed: 02/26/24					
Aluminum, Total	ND	4.4	20	ug/l						

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-----	-------	-------------	---------------	------	--------	-----	-----------	-----------

Batch: W4B1962 - EPA 200.8 (Continued)

Blank (W4B1962-BLK1)

Prepared: 02/23/24 Analyzed: 02/26/24

Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	9.55	3.9	20	ug/l							J
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							

LCS (W4B1962-BS1)

Prepared: 02/23/24 Analyzed: 02/26/24

Aluminum, Total	45.1	4.4	20	ug/l	50.0		90	85-115			
Arsenic, Total	50.7	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	50.3	0.14	1.0	ug/l	50.0		101	85-115			
Copper, Total	51.8	0.23	0.50	ug/l	50.0		103	85-115			
Iron, Dissolved	1130	3.9	20	ug/l	1050		108	85-115			
Iron, Total	1130	3.9	20	ug/l	1050		108	85-115			
Lead, Total	50.2	0.083	0.20	ug/l	50.0		100	85-115			
Manganese, Dissolved	49.8	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	49.8	0.23	1.0	ug/l	50.0		100	85-115			
Potassium, Total	1.99	0.068	0.50	mg/l	2.05		97	85-115			
Selenium, Total	50.1	0.067	0.40	ug/l	50.0		100	85-115			
Sodium, Total	2.09	0.10	1.0	mg/l	2.05		102	85-115			
Strontium, Total	47.0	0.036	0.20	ug/l	50.0		94	85-115			

Matrix Spike (W4B1962-MS1)

Source: 4B14107-04

Prepared: 02/23/24 Analyzed: 02/26/24

Aluminum, Total	46.5	4.4	20	ug/l	50.0	ND	93	70-130			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0	ND	101	70-130			
Barium, Total	50.2	0.14	1.0	ug/l	50.0	ND	100	70-130			
Copper, Total	52.0	0.23	0.50	ug/l	50.0	ND	104	70-130			
Iron, Dissolved	1190	3.9	20	ug/l	1050	ND	113	70-130			
Iron, Total	1190	3.9	20	ug/l	1050	ND	113	70-130			
Lead, Total	50.2	0.083	0.20	ug/l	50.0	ND	100	70-130			
Manganese, Dissolved	50.2	0.11	1.0	ug/l	50.0	ND	100	70-130			
Manganese, Total	50.2	0.23	1.0	ug/l	50.0	ND	100	70-130			
Potassium, Total	2.02	0.068	0.50	mg/l	2.05	ND	99	70-130			
Selenium, Total	49.6	0.067	0.40	ug/l	50.0	ND	99	70-130			
Sodium, Total	2.10	0.10	1.0	mg/l	2.05	ND	102	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier	
Batch: W4B1962 - EPA 200.8 (Continued)										
Matrix Spike (W4B1962-MS1) Source: 4B14107-04 Prepared: 02/23/24 Analyzed: 02/26/24										
Strontium, Total	47.4	0.036	0.20	ug/l	50.0	ND	95 70-130			
Matrix Spike (W4B1962-MS2) Source: 4B16032-01 Prepared: 02/23/24 Analyzed: 02/26/24										
Aluminum, Total	46.6	4.4	20	ug/l	50.0	ND	93 70-130			
Arsenic, Total	52.5	0.074	0.40	ug/l	50.0	0.687	104 70-130			
Barium, Total	108	0.14	1.0	ug/l	50.0	56.4	103 70-130			
Copper, Total	49.4	0.23	0.50	ug/l	50.0	ND	99 70-130			
Iron, Dissolved	1150	3.9	20	ug/l	1050	ND	110 70-130			
Iron, Total	1150	3.9	20	ug/l	1050	21.5	108 70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101 70-130			
Manganese, Dissolved	62.0	0.11	1.0	ug/l	50.0	12.0	100 70-130			
Manganese, Total	62.0	0.23	1.0	ug/l	50.0	14.5	95 70-130			
Potassium, Total	4.38	0.068	0.50	mg/l	2.05	2.55	89 70-130			
Selenium, Total	53.3	0.067	0.40	ug/l	50.0	3.90	99 70-130			
Sodium, Total	104	0.10	1.0	mg/l	2.05	108	NR 70-130		MS-02	
Strontium, Total	645	0.036	0.20	ug/l	50.0	571	147 70-130		MS-02	
Matrix Spike Dup (W4B1962-MSD1) Source: 4B14107-04 Prepared: 02/23/24 Analyzed: 02/26/24										
Aluminum, Total	48.0	4.4	20	ug/l	50.0	ND	96 70-130	3 30		
Arsenic, Total	50.9	0.074	0.40	ug/l	50.0	ND	102 70-130	0.6 30		
Barium, Total	50.3	0.14	1.0	ug/l	50.0	ND	100 70-130	0.1 30		
Copper, Total	52.8	0.23	0.50	ug/l	50.0	ND	106 70-130	2 30		
Iron, Dissolved	1170	3.9	20	ug/l	1050	ND	112 70-130	1 30		
Iron, Total	1170	3.9	20	ug/l	1050	ND	112 70-130	1 30		
Lead, Total	49.7	0.083	0.20	ug/l	50.0	ND	99 70-130	0.8 30		
Manganese, Dissolved	50.3	0.11	1.0	ug/l	50.0	ND	100 70-130	0.1 30		
Manganese, Total	50.3	0.23	1.0	ug/l	50.0	ND	100 70-130	0.1 30		
Potassium, Total	2.05	0.068	0.50	mg/l	2.05	ND	100 70-130	1 30		
Selenium, Total	50.3	0.067	0.40	ug/l	50.0	ND	101 70-130	1 30		
Sodium, Total	2.12	0.10	1.0	mg/l	2.05	ND	103 70-130	1 30		
Strontium, Total	47.7	0.036	0.20	ug/l	50.0	ND	95 70-130	0.6 30		
Matrix Spike Dup (W4B1962-MSD2) Source: 4B16032-01 Prepared: 02/23/24 Analyzed: 02/26/24										
Aluminum, Total	47.6	4.4	20	ug/l	50.0	ND	95 70-130	2 30		
Arsenic, Total	52.0	0.074	0.40	ug/l	50.0	0.687	103 70-130	0.9 30		
Barium, Total	107	0.14	1.0	ug/l	50.0	56.4	102 70-130	0.6 30		
Copper, Total	50.3	0.23	0.50	ug/l	50.0	ND	100 70-130	2 30		
Iron, Dissolved	1180	3.9	20	ug/l	1050	ND	113 70-130	3 30		
Iron, Total	1180	3.9	20	ug/l	1050	21.5	110 70-130	3 30		
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101 70-130	0.2 30		
Manganese, Dissolved	63.9	0.11	1.0	ug/l	50.0	12.0	104 70-130	3 30		
Manganese, Total	63.9	0.23	1.0	ug/l	50.0	14.5	99 70-130	3 30		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/04/2024 09:54

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1962 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B1962-MSD2) Source: 4B16032-01 Prepared: 02/23/24 Analyzed: 02/26/24											
Potassium, Total	4.47	0.068	0.50	mg/l	2.05	2.55	94	70-130	2	30	
Selenium, Total	53.3	0.067	0.40	ug/l	50.0	3.90	99	70-130	0.04	30	
Sodium, Total	107	0.10	1.0	mg/l	2.05	108	NR	70-130	2	30	MS-02
Strontium, Total	636	0.036	0.20	ug/l	50.0	571	128	70-130	1	30	
Batch: W4B2336 - EPA 200.8											
Blank (W4B2336-BLK1) Prepared: 02/29/24 Analyzed: 03/01/24											
Iron, Total	ND	3.9	20	ug/l							
LCS (W4B2336-BS1) Prepared: 02/29/24 Analyzed: 03/01/24											
Iron, Total	1150	3.9	20	ug/l	1050		110	85-115			
Matrix Spike (W4B2336-MS1) Source: 4B15017-02 Prepared: 02/29/24 Analyzed: 03/01/24											
Iron, Total	1230	3.9	20	ug/l	1050	117	106	70-130			
Matrix Spike (W4B2336-MS2) Source: 4B21219-01 Prepared: 02/29/24 Analyzed: 03/01/24											
Iron, Total	16900	7.9	40	ug/l	1050	13900	290	70-130			MS-02
Matrix Spike Dup (W4B2336-MSD1) Source: 4B15017-02 Prepared: 02/29/24 Analyzed: 03/01/24											
Iron, Total	1240	3.9	20	ug/l	1050	117	107	70-130	0.4	30	
Matrix Spike Dup (W4B2336-MSD2) Source: 4B21219-01 Prepared: 02/29/24 Analyzed: 03/01/24											
Iron, Total	15900	7.9	40	ug/l	1050	13900	187	70-130	7	30	MS-02

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1419 - SM 9221B											
Blank (W4B1419-BLK1) Prepared: 02/15/24 Analyzed: 02/17/24											
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/04/2024 09:54

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Calculation is based on source temperature @20C
HT1.0	Holding time exceeded. Sample was received at the lab past holding time.
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
MS1.2	Matrix spike recovery exceeds lower control limit. Reported results for parent matrix should be considered estimated due to matrix interferences.
O-09	This sample was received with the EPA recommended holding time expired.
O-15	The sample was received with the recommended holding time nearly expired. It was analyzed as soon as possible but the maximum holding time was slightly exceeded.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B16033

Project: COSM 97-005 - Background Water Quality

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 3/13/2024

Received Date: 2/15/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

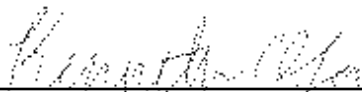
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/15/24 with the Chain-of-Custody document. The samples were received in good condition, at 2.2 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-4-54	Earl Garcia	4B16033-01	Water	02/15/24 09:25	
AT-GS-4-57	Earl Garcia	4B16033-02	Water	02/15/24 11:00	
AT-RES-4-522	Earl Garcia	4B16033-03	Water	02/15/24 11:45	
AT-GS-3-57	Earl Garcia	4B16033-04	Water	02/15/24 14:35	
AT-RES-3-522	Earl Garcia	4B16033-05	Water	02/15/24 15:20	
AT-GS-3-57	Earl Garcia	4B16033-06	Water	02/15/24 14:45	
AT-RO-3-514	Earl Garcia	4B16033-07	Water	02/15/24 17:20	
AT-RO-3-524	Earl Garcia	4B16033-08	Water	02/15/24 17:30	
AT-DEC-3-518	Earl Garcia	4B16033-09	Water	02/15/24 14:35	
AT-DEC-3-519	Earl Garcia	4B16033-10	Water	02/15/24 14:30	
AT-RES-3-522	Earl Garcia	4B16033-11	Water	02/15/24 15:25	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Freon 113	76-13-1			⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3	⊗		⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
THMs, Total				⊗
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16033-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0327	Preparation: _NONE (TOC/TOX)					Analyst: rem
Total Organic Carbon (TOC)	0.47	0.30	mg/l	1	03/07/24	

Sample Results

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16033-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0327	Preparation: _NONE (TOC/TOX)					Analyst: rem
Total Organic Carbon (TOC)	0.75	0.30	mg/l	1	03/07/24	

Sample Results

Sample: AT-RES-4-522

Sampled: 02/15/24 11:45 by Earl Garcia

4B16033-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0327	Preparation: _NONE (TOC/TOX)					Analyst: rem
Total Organic Carbon (TOC)	0.36	0.30	mg/l	1	03/07/24	

Sample Results

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16033-04 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0327	Preparation: _NONE (TOC/TOX)					Analyst: rem
Total Organic Carbon (TOC)	0.67	0.30	mg/l	1	03/07/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-RES-3-522

Sampled: 02/15/24 15:20 by Earl Garcia

4B16033-05 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0327	Preparation: _NONE (TOC/TOX)					
Total Organic Carbon (TOC)	0.45	0.30	mg/l	1	03/07/24	

Instr: TOC02

Prepared: 03/05/24 17:21

Analyst: rem

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:45 by Earl Garcia

4B16033-06 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522						
Method: EPA 522		Instr: GCMS20				
Batch ID: W4B1631	Preparation: EPA 522/SPE	Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	0.22	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>						
1,4-Dioxane-d8	84%	Conc: 7.81	70-130		02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12				
Batch ID: W4B1935	Preparation: EPA 5030B	Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06				
Batch ID: W4B1913	Preparation: EPA 537/SPE	Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	1.7	ng/l	1	03/02/24	
ADONA	ND	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	1.7	ng/l	1	03/02/24	
PFBS	ND	1.7	ng/l	1	03/02/24	
PFDA	ND	1.7	ng/l	1	03/02/24	
PFDoA	ND	1.7	ng/l	1	03/02/24	
PFHpA	ND	1.7	ng/l	1	03/02/24	
PFHxA	ND	1.7	ng/l	1	03/02/24	
PFHxS	ND	1.7	ng/l	1	03/02/24	
PFNA	ND	1.7	ng/l	1	03/02/24	
PFOA	ND	1.7	ng/l	1	03/02/24	
PFOS	ND	1.7	ng/l	1	03/02/24	
PFTeDA	ND	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	1.7	ng/l	1	03/02/24	
PFUnA	ND	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>						
13C2-PFDA	121%	Conc: 42.3	70-130		03/02/24	
13C2-PFHxA	105%	Conc: 36.6	70-130		03/02/24	
d5-EtFOSAA	111%	Conc: 155	70-130		03/02/24	
HFPO-DA-13C3	96%	Conc: 33.7	70-130		03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16033

Page 5 of 41

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:45 by Earl Garcia

4B16033-06 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	0.59	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND	0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
2-Butanone	ND	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	5.0	ug/l	1	02/29/24	
Benzene	ND	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.50	ug/l	1	02/29/24	
Bromoform	9.5	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:45 by Earl Garcia

4B16033-06 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
Dibromochloromethane	2.3	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.50	ug/l	1	02/29/24	
Freon 113	ND	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Styrene	ND	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.50	ug/l	1	02/29/24	
THMs, Total	12	0.50	ug/l	1	02/29/24	
Toluene	ND	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
Trichloroethene	5.0	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.50	ug/l	1	02/29/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:45 by Earl Garcia

4B16033-06 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2			Instr: GCMS08			
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM
1,2-Dichlorobenzene-d4	82% Conc: 40.9	70-130			02/29/24	
4-Bromofluorobenzene	80% Conc: 39.9	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-3-514

Sampled: 02/15/24 17:20 by Earl Garcia

4B16033-07 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522						
Method: EPA 522		Instr: GCMS20				
Batch ID: W4B1631	Preparation: EPA 522/SPE	Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	0.87	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>						
1,4-Dioxane-d8	78%	Conc: 7.54	70-130		02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12				
Batch ID: W4B1935	Preparation: EPA 5030B	Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06				
Batch ID: W4B1913	Preparation: EPA 537/SPE	Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	2.0	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	2.0	ng/l	1	03/02/24	
ADONA	ND	2.0	ng/l	1	03/02/24	
EtFOSAA	ND	2.0	ng/l	1	03/02/24	
HFPO-DA	ND	2.0	ng/l	1	03/02/24	
MeFOSAA	ND	2.0	ng/l	1	03/02/24	
PFBS	ND	2.0	ng/l	1	03/02/24	
PFDA	ND	2.0	ng/l	1	03/02/24	
PFDoA	ND	2.0	ng/l	1	03/02/24	
PFHpA	ND	2.0	ng/l	1	03/02/24	
PFHxA	ND	2.0	ng/l	1	03/02/24	
PFHxS	ND	2.0	ng/l	1	03/02/24	
PFNA	ND	2.0	ng/l	1	03/02/24	
PFOA	ND	2.0	ng/l	1	03/02/24	
PFOS	ND	2.0	ng/l	1	03/02/24	
PFTeDA	ND	2.0	ng/l	1	03/02/24	
PFTTrDA	ND	2.0	ng/l	1	03/02/24	
PFUnA	ND	2.0	ng/l	1	03/02/24	
<i>Surrogate(s)</i>						
13C2-PFDA	119%	Conc: 43.8	70-130		03/02/24	
13C2-PFHxA	96%	Conc: 35.2	70-130		03/02/24	
d5-EtFOSAA	110%	Conc: 161	70-130		03/02/24	
HFPO-DA-13C3	87%	Conc: 32.1	70-130		03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16033

Page 9 of 41

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-3-514

Sampled: 02/15/24 17:20 by Earl Garcia

4B16033-07 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45			Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND	0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
2-Butanone	ND	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	5.0	ug/l	1	02/29/24	
Benzene	ND	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.50	ug/l	1	02/29/24	
Bromoform	7.4	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-3-514

Sampled: 02/15/24 17:20 by Earl Garcia

4B16033-07 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
Dibromochloromethane	2.4	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.50	ug/l	1	02/29/24	
Freon 113	ND	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Styrene	ND	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.50	ug/l	1	02/29/24	
THMs, Total	9.8	0.50	ug/l	1	02/29/24	
Toluene	ND	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
Trichloroethene	5.2	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.50	ug/l	1	02/29/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-3-514

Sampled: 02/15/24 17:20 by Earl Garcia

4B16033-07 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2			Instr: GCMS08			
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM
1,2-Dichlorobenzene-d4	80% Conc: 39.8	70-130			02/29/24	
4-Bromofluorobenzene	79% Conc: 39.3	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-3-524

Sampled: 02/15/24 17:30 by Earl Garcia

4B16033-08 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522						
Method: EPA 522		Instr: GCMS20				
Batch ID: W4B1631	Preparation: EPA 522/SPE	Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	0.094	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>						
1,4-Dioxane-d8	83%	Conc: 7.97	70-130		02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12				
Batch ID: W4B1935	Preparation: EPA 5030B	Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06				
Batch ID: W4B1913	Preparation: EPA 537/SPE	Prepared: 02/22/24 16:33		Analyst: JNA		
11Cl-PF3OUdS	ND	1.8	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	1.8	ng/l	1	03/02/24	
ADONA	ND	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	1.8	ng/l	1	03/02/24	
PFBS	ND	1.8	ng/l	1	03/02/24	
PFDA	ND	1.8	ng/l	1	03/02/24	
PFDoA	ND	1.8	ng/l	1	03/02/24	
PFHpA	ND	1.8	ng/l	1	03/02/24	
PFHxA	ND	1.8	ng/l	1	03/02/24	
PFHxS	ND	1.8	ng/l	1	03/02/24	
PFNA	ND	1.8	ng/l	1	03/02/24	
PFOA	ND	1.8	ng/l	1	03/02/24	
PFOS	ND	1.8	ng/l	1	03/02/24	
PFTeDA	ND	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	1.8	ng/l	1	03/02/24	
PFUnA	ND	1.8	ng/l	1	03/02/24	
<i>Surrogate(s)</i>						
13C2-PFDA	124%	Conc: 43.4	70-130		03/02/24	
13C2-PFHxA	117%	Conc: 41.1	70-130		03/02/24	
d5-EtFOSAA	108%	Conc: 152	70-130		03/02/24	
HFPO-DA-13C3	108%	Conc: 37.9	70-130		03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16033

Page 13 of 41

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-3-524

Sampled: 02/15/24 17:30 by Earl Garcia

4B16033-08 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND	0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
2-Butanone	ND	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	5.0	ug/l	1	02/29/24	
Benzene	ND	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.50	ug/l	1	02/29/24	
Bromoform	4.5	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-3-524

Sampled: 02/15/24 17:30 by Earl Garcia

4B16033-08 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45			Analyst: ADM	
Dibromochloromethane	1.3	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.50	ug/l	1	02/29/24	
Freon 113	ND	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Styrene	ND	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.50	ug/l	1	02/29/24	
THMs, Total	5.8	0.50	ug/l	1	02/29/24	
Toluene	ND	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
Trichloroethene	2.9	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.50	ug/l	1	02/29/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-3-524

Sampled: 02/15/24 17:30 by Earl Garcia

4B16033-08 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2			Instr: GCMS08			
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM
1,2-Dichlorobenzene-d4	80% Conc: 39.9	70-130			02/29/24	
4-Bromofluorobenzene	78% Conc: 39.0	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-3-518

Sampled: 02/15/24 14:35 by Earl Garcia

4B16033-09 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522						
Method: EPA 522		Instr: GCMS20				
Batch ID: W4B1631	Preparation: EPA 522/SPE	Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	0.32	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>						
1,4-Dioxane-d8	78%	Conc: 7.83	70-130		02/26/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP		Instr: GCMS12				
Batch ID: W4B1935	Preparation: EPA 5030B	Prepared: 02/23/24 07:54		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1		Instr: LCMS06				
Batch ID: W4B1968	Preparation: EPA 537/SPE	Prepared: 02/23/24 10:04		Analyst: JNA		
11Cl-PF3OUdS	ND	1.8	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	1.8	ng/l	1	03/02/24	
ADONA	ND	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	1.8	ng/l	1	03/02/24	
PFBS	ND	1.8	ng/l	1	03/02/24	
PFDA	ND	1.8	ng/l	1	03/02/24	
PFDoA	ND	1.8	ng/l	1	03/02/24	
PFHpA	ND	1.8	ng/l	1	03/02/24	
PFHxA	ND	1.8	ng/l	1	03/02/24	
PFHxS	ND	1.8	ng/l	1	03/02/24	
PFNA	ND	1.8	ng/l	1	03/02/24	
PFOA	ND	1.8	ng/l	1	03/02/24	
PFOS	ND	1.8	ng/l	1	03/02/24	
PFTeDA	ND	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	1.8	ng/l	1	03/02/24	
PFUnA	ND	1.8	ng/l	1	03/02/24	
<i>Surrogate(s)</i>						
13C2-PFDA	123%	Conc: 43.5	70-130		03/02/24	
13C2-PFHxA	113%	Conc: 39.7	70-130		03/02/24	
d5-EtFOSAA	111%	Conc: 156	70-130		03/02/24	
HFPO-DA-13C3	99%	Conc: 35.0	70-130		03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16033

Page 17 of 41

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-3-518

Sampled: 02/15/24 14:35 by Earl Garcia

4B16033-09 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361		Preparation: EPA 5030B			Prepared: 02/28/24 11:45	
Analyst: ADM						
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND	0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
2-Butanone	ND	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	5.0	ug/l	1	02/29/24	
Benzene	ND	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.50	ug/l	1	02/29/24	
Bromoform	4.7	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-3-518

Sampled: 02/15/24 14:35 by Earl Garcia

4B16033-09 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
Dibromochloromethane	1.0	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.50	ug/l	1	02/29/24	
Freon 113	ND	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Styrene	ND	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.50	ug/l	1	02/29/24	
THMs, Total	5.7	0.50	ug/l	1	02/29/24	
Toluene	ND	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
Trichloroethene	3.0	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.50	ug/l	1	02/29/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-3-518

Sampled: 02/15/24 14:35 by Earl Garcia

4B16033-09 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2			Instr: GCMS08			
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM
1,2-Dichlorobenzene-d4	80% Conc: 40.1	70-130			02/29/24	
4-Bromofluorobenzene	79% Conc: 39.7	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-3-519

Sampled: 02/15/24 14:30 by Earl Garcia

4B16033-10 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1631

Preparation: EPA 522/SPE

Prepared: 02/21/24 07:41

Analyst: mld

1,4-Dioxane	0.19	0.070	ug/l	1	02/26/24	
-------------	------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	81%	Conc: 7.64	70-130		02/26/24	
----------------	-----	------------	--------	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W4B1935

Preparation: EPA 5030B

Prepared: 02/23/24 07:54

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0050	ug/l	1	02/24/24	
------------------------	----	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W4B1968

Preparation: EPA 537/SPE

Prepared: 02/23/24 10:04

Analyst: JNA

11Cl-PF3OUdS	ND	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	1.7	ng/l	1	03/02/24	
ADONA	ND	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	1.7	ng/l	1	03/02/24	
PFBS	ND	1.7	ng/l	1	03/02/24	
PFDA	ND	1.7	ng/l	1	03/02/24	
PFDoA	ND	1.7	ng/l	1	03/02/24	
PFHpA	ND	1.7	ng/l	1	03/02/24	
PFHxA	ND	1.7	ng/l	1	03/02/24	
PFHxS	ND	1.7	ng/l	1	03/02/24	
PFNA	ND	1.7	ng/l	1	03/02/24	
PFOA	ND	1.7	ng/l	1	03/02/24	
PFOS	ND	1.7	ng/l	1	03/02/24	
PFTeDA	ND	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	1.7	ng/l	1	03/02/24	
PFUnA	ND	1.7	ng/l	1	03/02/24	

Surrogate(s)

13C2-PFDA	118%	Conc: 40.6	70-130		03/02/24	
13C2-PFHxA	109%	Conc: 37.5	70-130		03/02/24	
d5-EtFOSAA	108%	Conc: 148	70-130		03/02/24	
HFPO-DA-13C3	101%	Conc: 34.7	70-130		03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16033

Page 21 of 41

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-3-519

Sampled: 02/15/24 14:30 by Earl Garcia

4B16033-10 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND	0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
2-Butanone	ND	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	5.0	ug/l	1	02/29/24	
Benzene	ND	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.50	ug/l	1	02/29/24	
Bromoform	3.8	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-3-519

Sampled: 02/15/24 14:30 by Earl Garcia

4B16033-10 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
Dibromochloromethane	0.79	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.50	ug/l	1	02/29/24	
Freon 113	ND	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Styrene	ND	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.50	ug/l	1	02/29/24	
THMs, Total	4.6	0.50	ug/l	1	02/29/24	
Toluene	ND	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.50	ug/l	1	02/29/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-3-519

Sampled: 02/15/24 14:30 by Earl Garcia

4B16033-10 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2			Instr: GCMS08			
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM
1,2-Dichlorobenzene-d4	82% Conc: 40.8	70-130			02/29/24	
4-Bromofluorobenzene	81% Conc: 40.4	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:25 by Earl Garcia

4B16033-11 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522						
Method: EPA 522		Instr: GCMS20				
Batch ID: W4B1631	Preparation: EPA 522/SPE	Prepared: 02/21/24 07:41		Analyst: mld		
1,4-Dioxane	0.33	0.070	ug/l	1	02/26/24	
<i>Surrogate(s)</i>						
1,4-Dioxane-d8	76%	Conc: 7.54	70-130		02/26/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM						
Method: SRL 524M-TCP		Instr: GCMS12				
Batch ID: W4B1936	Preparation: EPA 5030B	Prepared: 02/23/24 07:55		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0050	ug/l	1	02/24/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS						
Method: EPA 537.1		Instr: LCMS06				
Batch ID: W4B1968	Preparation: EPA 537/SPE	Prepared: 02/23/24 10:04		Analyst: JNA		
11Cl-PF3OUdS	ND	2.0	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	2.0	ng/l	1	03/02/24	
ADONA	ND	2.0	ng/l	1	03/02/24	
EtFOSAA	ND	2.0	ng/l	1	03/02/24	
HFPO-DA	ND	2.0	ng/l	1	03/02/24	
MeFOSAA	ND	2.0	ng/l	1	03/02/24	
PFBS	ND	2.0	ng/l	1	03/02/24	
PFDA	ND	2.0	ng/l	1	03/02/24	
PFDoA	ND	2.0	ng/l	1	03/02/24	
PFHpA	ND	2.0	ng/l	1	03/02/24	
PFHxA	ND	2.0	ng/l	1	03/02/24	
PFHxS	ND	2.0	ng/l	1	03/02/24	
PFNA	ND	2.0	ng/l	1	03/02/24	
PFOA	ND	2.0	ng/l	1	03/02/24	
PFOS	ND	2.0	ng/l	1	03/02/24	
PFTeDA	ND	2.0	ng/l	1	03/02/24	
PFTTrDA	ND	2.0	ng/l	1	03/02/24	
PFUnA	ND	2.0	ng/l	1	03/02/24	
<i>Surrogate(s)</i>						
13C2-PFDA	116%	Conc: 42.5	70-130		03/02/24	
13C2-PFHxA	99%	Conc: 36.2	70-130		03/02/24	
d5-EtFOSAA	103%	Conc: 151	70-130		03/02/24	
HFPO-DA-13C3	90%	Conc: 32.8	70-130		03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B16033

Page 25 of 41

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:25 by Earl Garcia

4B16033-11 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND	0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.50	ug/l	1	02/29/24	
2-Butanone	ND	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	5.0	ug/l	1	02/29/24	
Benzene	ND	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.50	ug/l	1	02/29/24	
Bromoform	3.3	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:25 by Earl Garcia

4B16033-11 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2		Instr: GCMS08				
Batch ID: W4B2361	Preparation: EPA 5030B	Prepared: 02/28/24 11:45		Analyst: ADM		
Dibromochloromethane	0.51	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.50	ug/l	1	02/29/24	
Freon 113	ND	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Styrene	ND	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.50	ug/l	1	02/29/24	
THMs, Total	3.8	0.50	ug/l	1	02/29/24	
Toluene	ND	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.50	ug/l	1	02/29/24	
Vinyl chloride	ND	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.50	ug/l	1	02/29/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:25 by Earl Garcia

4B16033-11 (Water)

(Continued)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)						
Method: EPA 524.2			Instr: GCMS08			
Batch ID: W4B2361		Preparation: EPA 5030B		Prepared: 02/28/24 11:45		Analyst: ADM
1,2-Dichlorobenzene-d4	77% Conc: 38.7	70-130			02/29/24	
4-Bromofluorobenzene	78% Conc: 39.1	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1631 - EPA 522										
Blank (W4B1631-BLK1)										
1,4-Dioxane	ND	0.070	ug/l							
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.94		ug/l	10.0		89	70-130			
LCS (W4B1631-BS1)										
1,4-Dioxane	0.0451	0.070	ug/l	0.0600		75	50-150			
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	8.64		ug/l	10.0		86	70-130			
LCS Dup (W4B1631-BS1)										
1,4-Dioxane	0.0553	0.070	ug/l	0.0600		92	50-150	20	50	
<i>Surrogate(s)</i>										
1,4-Dioxane-d8	9.55		ug/l	10.0		96	70-130			

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0327 - SM 5310B										
Blank (W4C0327-BLK1)										
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W4C0327-BS1)										
Total Organic Carbon (TOC)	0.980	0.30	mg/l	1.00		98	85-115			
Matrix Spike (W4C0327-MS1)										
Total Organic Carbon (TOC)	7.26	0.30	mg/l	5.00	2.84	88	76-115			
Matrix Spike Dup (W4C0327-MSD1)										
Total Organic Carbon (TOC)	7.18	0.30	mg/l	5.00	2.84	87	76-115	1	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1935 - SRL 524M-TCP										
Blank (W4B1935-BLK1)										
1,2,3-Trichloropropane	ND	0.0050	ug/l							
				Prepared: 02/23/24 Analyzed: 02/24/24						
LCS (W4B1935-BS1)										
1,2,3-Trichloropropane	0.0197	0.0050	ug/l	0.0200		99	80-120			
				Prepared: 02/23/24 Analyzed: 02/24/24						
LCS Dup (W4B1935-BSD1)										
1,2,3-Trichloropropane	0.0218	0.0050	ug/l	0.0200		109	80-120	10	20	
				Prepared: 02/23/24 Analyzed: 02/24/24						
Duplicate (W4B1935-DUP1)										
		Source: 4B16031-08		Prepared: 02/23/24 Analyzed: 02/24/24						
1,2,3-Trichloropropane	ND	0.0050	ug/l		ND				20	
Batch: W4B1936 - SRL 524M-TCP										
Blank (W4B1936-BLK1)										
1,2,3-Trichloropropane	ND	0.0050	ug/l							
				Prepared: 02/23/24 Analyzed: 02/24/24						
LCS (W4B1936-BS1)										
1,2,3-Trichloropropane	0.0200	0.0050	ug/l	0.0200		100	80-120			
				Prepared: 02/23/24 Analyzed: 02/24/24						
LCS Dup (W4B1936-BSD1)										
1,2,3-Trichloropropane	0.0236	0.0050	ug/l	0.0200		118	80-120	17	20	
				Prepared: 02/23/24 Analyzed: 02/24/24						
Duplicate (W4B1936-DUP1)										
		Source: 4B16033-11		Prepared: 02/23/24 Analyzed: 02/24/24						
1,2,3-Trichloropropane	ND	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1913 - EPA 537.1									
Blank (W4B1913-BLK1)					Prepared: 02/22/24 Analyzed: 03/02/24				
11CI-PF3OUdS	ND	2.0	ng/l						
9CI-PF3ONS	ND	2.0	ng/l						
ADONA	ND	2.0	ng/l						
EtFOSAA	ND	2.0	ng/l						
HFPO-DA	ND	2.0	ng/l						
MeFOSAA	ND	2.0	ng/l						
PFBS	ND	2.0	ng/l						
PFDA	ND	2.0	ng/l						
PFDoA	ND	2.0	ng/l						
PFHpA	ND	2.0	ng/l						
PFHxA	ND	2.0	ng/l						
PFHxS	ND	2.0	ng/l						
PFNA	ND	2.0	ng/l						
PFOA	ND	2.0	ng/l						
PFOS	ND	2.0	ng/l						
PFTeDA	ND	2.0	ng/l						
PFTrDA	ND	2.0	ng/l						
PFUnA	ND	2.0	ng/l						
<i>Surrogate(s)</i>									
13C2-PFDA	48.5		ng/l	40.0		121 70-130			
13C2-PFHxA	45.9		ng/l	40.0		115 70-130			
d5-EtFOSAA	173		ng/l	160		108 70-130			
HFPO-DA-13C3	43.0		ng/l	40.0		108 70-130			
LCS (W4B1913-BS1)					Prepared: 02/22/24 Analyzed: 03/02/24				
11CI-PF3OUdS	17.4	2.0	ng/l	20.0		87 70-130			
9CI-PF3ONS	17.3	2.0	ng/l	20.0		87 70-130			
ADONA	19.2	2.0	ng/l	20.0		96 70-130			
EtFOSAA	18.6	2.0	ng/l	20.0		93 70-130			
HFPO-DA	18.5	2.0	ng/l	20.0		93 70-130			
MeFOSAA	18.9	2.0	ng/l	20.0		95 70-130			
PFBS	19.7	2.0	ng/l	20.0		98 70-130			
PFDA	18.4	2.0	ng/l	20.0		92 70-130			
PFDoA	18.7	2.0	ng/l	20.0		94 70-130			
PFHpA	19.9	2.0	ng/l	20.0		100 70-130			
PFHxA	19.5	2.0	ng/l	20.0		97 70-130			
PFHxS	19.3	2.0	ng/l	20.0		97 70-130			
PFNA	19.5	2.0	ng/l	20.0		98 70-130			
PFOA	20.0	2.0	ng/l	20.0		100 70-130			
PFOS	18.6	2.0	ng/l	20.0		93 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1913 - EPA 537.1 (Continued)									
LCS (W4B1913-BS1)					Prepared: 02/22/24 Analyzed: 03/02/24				
PFTeDA	18.0	2.0	ng/l	20.0	90	70-130			
PFTTrDA	18.2	2.0	ng/l	20.0	91	70-130			
PFUnA	18.9	2.0	ng/l	20.0	94	70-130			
<i>Surrogate(s)</i>									
13C2-PFDA	48.5		ng/l	40.0	121	70-130			
13C2-PFHxA	46.0		ng/l	40.0	115	70-130			
d5-EtFOSAA	180		ng/l	160	112	70-130			
HFPO-DA-13C3	43.7		ng/l	40.0	109	70-130			
LCS Dup (W4B1913-BSD1)					Prepared: 02/22/24 Analyzed: 03/02/24				
11CI-PF3OUdS	17.8	2.0	ng/l	20.0	89	70-130	2	30	
9CI-PF3ONS	18.0	2.0	ng/l	20.0	90	70-130	4	30	
ADONA	19.9	2.0	ng/l	20.0	99	70-130	3	30	
EtFOSAA	18.2	2.0	ng/l	20.0	91	70-130	3	30	
HFPO-DA	18.7	2.0	ng/l	20.0	93	70-130	0.9	30	
MeFOSAA	18.9	2.0	ng/l	20.0	94	70-130	0.3	30	
PFBS	19.7	2.0	ng/l	20.0	99	70-130	0.3	30	
PFDA	18.3	2.0	ng/l	20.0	91	70-130	0.9	30	
PFDoA	19.3	2.0	ng/l	20.0	96	70-130	3	30	
PFHpA	20.4	2.0	ng/l	20.0	102	70-130	2	30	
PFHxA	19.9	2.0	ng/l	20.0	100	70-130	2	30	
PFHxS	19.7	2.0	ng/l	20.0	98	70-130	2	30	
PFNA	20.2	2.0	ng/l	20.0	101	70-130	4	30	
PFOA	20.2	2.0	ng/l	20.0	101	70-130	0.8	30	
PFOS	19.1	2.0	ng/l	20.0	95	70-130	2	30	
PFTeDA	17.6	2.0	ng/l	20.0	88	70-130	2	30	
PFTTrDA	18.2	2.0	ng/l	20.0	91	70-130	0.07	30	
PFUnA	19.3	2.0	ng/l	20.0	97	70-130	2	30	
<i>Surrogate(s)</i>									
13C2-PFDA	48.5		ng/l	40.0	121	70-130			
13C2-PFHxA	47.6		ng/l	40.0	119	70-130			
d5-EtFOSAA	175		ng/l	160	110	70-130			
HFPO-DA-13C3	45.2		ng/l	40.0	113	70-130			
Batch: W4B1968 - EPA 537.1									
Blank (W4B1968-BLK1)					Prepared: 02/23/24 Analyzed: 03/02/24				
11CI-PF3OUdS	ND	2.0	ng/l						
9CI-PF3ONS	ND	2.0	ng/l						
ADONA	ND	2.0	ng/l						
EtFOSAA	ND	2.0	ng/l						
HFPO-DA	ND	2.0	ng/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1968 - EPA 537.1 (Continued)								
Blank (W4B1968-BLK1)				Prepared: 02/23/24 Analyzed: 03/02/24				
MeFOSAA	ND	2.0	ng/l					
PFBS	ND	2.0	ng/l					
PFDA	ND	2.0	ng/l					
PFDoA	ND	2.0	ng/l					
PFHpA	ND	2.0	ng/l					
PFHxA	ND	2.0	ng/l					
PFHxS	ND	2.0	ng/l					
PFNA	ND	2.0	ng/l					
PFOA	ND	2.0	ng/l					
PFOS	ND	2.0	ng/l					
PFTeDA	ND	2.0	ng/l					
PFTrDA	ND	2.0	ng/l					
PFUnA	ND	2.0	ng/l					
<i>Surrogate(s)</i>								
13C2-PFDA	49.4		ng/l	40.0		124 70-130		
13C2-PFHxA	46.2		ng/l	40.0		116 70-130		
d5-EtFOSAA	180		ng/l	160		112 70-130		
HFPO-DA-13C3	41.5		ng/l	40.0		104 70-130		
LCS (W4B1968-BS1)				Prepared: 02/23/24 Analyzed: 03/02/24				
11Cl-PF3OUdS	17.4	2.0	ng/l	20.0		87 70-130		
9Cl-PF3ONS	17.3	2.0	ng/l	20.0		87 70-130		
ADONA	19.2	2.0	ng/l	20.0		96 70-130		
EtFOSAA	18.6	2.0	ng/l	20.0		93 70-130		
HFPO-DA	18.5	2.0	ng/l	20.0		93 70-130		
MeFOSAA	18.9	2.0	ng/l	20.0		95 70-130		
PFBS	19.7	2.0	ng/l	20.0		98 70-130		
PFDA	18.4	2.0	ng/l	20.0		92 70-130		
PFDoA	18.7	2.0	ng/l	20.0		94 70-130		
PFHpA	19.9	2.0	ng/l	20.0		100 70-130		
PFHxA	19.5	2.0	ng/l	20.0		97 70-130		
PFHxS	19.3	2.0	ng/l	20.0		97 70-130		
PFNA	19.5	2.0	ng/l	20.0		98 70-130		
PFOA	20.0	2.0	ng/l	20.0		100 70-130		
PFOS	18.6	2.0	ng/l	20.0		93 70-130		
PFTeDA	18.0	2.0	ng/l	20.0		90 70-130		
PFTrDA	18.2	2.0	ng/l	20.0		91 70-130		
PFUnA	18.9	2.0	ng/l	20.0		94 70-130		
<i>Surrogate(s)</i>								
13C2-PFDA	48.5		ng/l	40.0		121 70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1968 - EPA 537.1 (Continued)									
LCS (W4B1968-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24				
<i>Surrogate(s)</i>									
13C2-PFHxA	46.0		ng/l	40.0		115 70-130			
d5-EtFOSAA	180		ng/l	160		112 70-130			
HFPO-DA-13C3	43.7		ng/l	40.0		109 70-130			
LCS Dup (W4B1968-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24				
11Cl-PF3OUdS	17.8	2.0	ng/l	20.0		89 70-130	2	30	
9Cl-PF3ONS	18.0	2.0	ng/l	20.0		90 70-130	4	30	
ADONA	19.9	2.0	ng/l	20.0		99 70-130	3	30	
EtFOSAA	18.2	2.0	ng/l	20.0		91 70-130	3	30	
HFPO-DA	18.7	2.0	ng/l	20.0		93 70-130	0.9	30	
MeFOSAA	18.9	2.0	ng/l	20.0		94 70-130	0.3	30	
PFBS	19.7	2.0	ng/l	20.0		99 70-130	0.3	30	
PFDA	18.3	2.0	ng/l	20.0		91 70-130	0.9	30	
PFDoA	19.3	2.0	ng/l	20.0		96 70-130	3	30	
PFHpA	20.4	2.0	ng/l	20.0		102 70-130	2	30	
PFHxA	19.9	2.0	ng/l	20.0		100 70-130	2	30	
PFHxS	19.7	2.0	ng/l	20.0		98 70-130	2	30	
PFNA	20.2	2.0	ng/l	20.0		101 70-130	4	30	
PFOA	20.2	2.0	ng/l	20.0		101 70-130	0.8	30	
PFOS	19.1	2.0	ng/l	20.0		95 70-130	2	30	
PFTeDA	17.6	2.0	ng/l	20.0		88 70-130	2	30	
PFTrDA	18.2	2.0	ng/l	20.0		91 70-130	0.07	30	
PFUnA	19.3	2.0	ng/l	20.0		97 70-130	2	30	
<i>Surrogate(s)</i>									
13C2-PFDA	48.5		ng/l	40.0		121 70-130			
13C2-PFHxA	47.6		ng/l	40.0		119 70-130			
d5-EtFOSAA	175		ng/l	160		110 70-130			
HFPO-DA-13C3	45.2		ng/l	40.0		113 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2										
Blank (W4B2361-BLK1)										
Prepared: 02/28/24 Analyzed: 02/29/24										
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
1,3-Dichloropropene, Total	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	2.0	ug/l							
Ethyl tert-butyl ether	ND	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)									
Blank (W4B2361-BLK1)					Prepared: 02/28/24 Analyzed: 02/29/24				
Ethylbenzene	ND	0.50	ug/l						
Freon 113	ND	5.0	ug/l						
Hexachlorobutadiene	ND	0.50	ug/l						
Isopropylbenzene	ND	0.50	ug/l						
m,p-Xylene	ND	0.50	ug/l						
m-Dichlorobenzene	ND	0.50	ug/l						
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/l						
Methylene chloride	ND	0.50	ug/l						
Naphthalene	ND	0.50	ug/l						
n-Butylbenzene	ND	0.50	ug/l						
n-Propylbenzene	ND	0.50	ug/l						
o-Dichlorobenzene	ND	0.50	ug/l						
o-Xylene	ND	0.50	ug/l						
p-Dichlorobenzene	ND	0.50	ug/l						
p-Isopropyltoluene	ND	0.50	ug/l						
sec-Butylbenzene	ND	0.50	ug/l						
Styrene	ND	0.50	ug/l						
Tert-amyl methyl ether	ND	2.0	ug/l						
tert-Butylbenzene	ND	0.50	ug/l						
Tetrachloroethene	ND	0.50	ug/l						
THMs, Total	ND	0.50	ug/l						
Toluene	ND	0.50	ug/l						
trans-1,2-Dichloroethene	ND	0.50	ug/l						
trans-1,3-Dichloropropene	ND	0.50	ug/l						
Trichloroethene	ND	0.50	ug/l						
Trichlorofluoromethane	ND	0.50	ug/l						
Vinyl chloride	ND	0.50	ug/l						
Xylenes, Total	ND	0.50	ug/l						
<i>Surrogate(s)</i>									
1,2-Dichlorobenzene-d4	40.9		ug/l	50.0		82 70-130			
4-Bromofluorobenzene	39.5		ug/l	50.0		79 70-130			
LCS (W4B2361-BS1)					Prepared: 02/28/24 Analyzed: 02/29/24				
1,1,1,2-Tetrachloroethane	4.54	0.50	ug/l	5.00		91 70-130			
1,1,1-Trichloroethane	4.80	0.50	ug/l	5.00		96 70-130			
1,1,2,2-Tetrachloroethane	4.44	0.50	ug/l	5.00		89 70-130			
1,1,2-Trichloroethane	4.58	0.50	ug/l	5.00		92 70-130			
1,1-Dichloroethane	6.10	0.50	ug/l	5.00		122 70-130			
1,1-Dichloroethene	4.40	0.50	ug/l	5.00		88 70-130			
1,1-Dichloropropene	4.97	0.50	ug/l	5.00		99 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)										
LCS (W4B2361-BS1)										
				Prepared: 02/28/24 Analyzed: 02/29/24						
1,2,3-Trichlorobenzene	4.44	0.50	ug/l	5.00		89	70-130			
1,2,4-Trichlorobenzene	4.55	0.50	ug/l	5.00		91	70-130			
1,2,4-Trimethylbenzene	5.07	0.50	ug/l	5.00		101	70-130			
1,2-Dichloroethane	4.74	0.50	ug/l	5.00		95	70-130			
1,2-Dichloropropane	4.41	0.50	ug/l	5.00		88	70-130			
1,3,5-Trimethylbenzene	5.23	0.50	ug/l	5.00		105	70-130			
1,3-Dichloropropane	5.06	0.50	ug/l	5.00		101	70-130			
2,2-Dichloropropane	4.03	0.50	ug/l	5.00		81	70-130			
2-Butanone	4.89	5.0	ug/l	5.00		98	70-130			
2-Chlorotoluene	5.37	0.50	ug/l	5.00		107	70-130			
2-Hexanone	4.16	5.0	ug/l	5.00		83	70-130			
4-Chlorotoluene	5.29	0.50	ug/l	5.00		106	70-130			
4-Methyl-2-pentanone	4.24	5.0	ug/l	5.00		85	70-130			
Benzene	5.25	0.50	ug/l	5.00		105	70-130			
Bromobenzene	5.11	0.50	ug/l	5.00		102	70-130			
Bromochloromethane	4.68	0.50	ug/l	5.00		94	70-130			
Bromodichloromethane	4.57	0.50	ug/l	5.00		91	70-130			
Bromoform	4.58	0.50	ug/l	5.00		92	70-130			
Bromomethane	3.76	0.50	ug/l	5.00		75	70-130			
Carbon tetrachloride	4.88	0.50	ug/l	5.00		98	70-130			
Chlorobenzene	4.93	0.50	ug/l	5.00		99	70-130			
Chloroethane	4.20	0.50	ug/l	5.00		84	70-130			
Chloroform	4.74	0.50	ug/l	5.00		95	70-130			
Chloromethane	4.89	0.50	ug/l	5.00		98	70-130			
cis-1,2-Dichloroethene	4.75	0.50	ug/l	5.00		95	70-130			
cis-1,3-Dichloropropene	4.53	0.50	ug/l	5.00		91	70-130			
Dibromochloromethane	4.45	0.50	ug/l	5.00		89	70-130			
Dibromomethane	4.36	0.50	ug/l	5.00		87	70-130			
Dichlorodifluoromethane (Freon 12)	4.89	0.50	ug/l	5.00		98	70-130			
Di-isopropyl ether	14.9	2.0	ug/l	20.0		74	70-130			
Ethyl tert-butyl ether	18.3	2.0	ug/l	20.0		91	70-130			
Ethylbenzene	5.08	0.50	ug/l	5.00		102	70-130			
Freon 113	4.15	5.0	ug/l	5.00		83	70-130			
Hexachlorobutadiene	4.80	0.50	ug/l	5.00		96	70-130			
Isopropylbenzene	5.49	0.50	ug/l	5.00		110	70-130			
m,p-Xylene	5.03	0.50	ug/l	5.00		101	70-130			
m-Dichlorobenzene	5.06	0.50	ug/l	5.00		101	70-130			
Methyl tert-butyl ether (MTBE)	15.9	2.0	ug/l	20.0		80	70-130			
Methylene chloride	4.57	0.50	ug/l	5.00		91	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)									
LCS (W4B2361-BS1)					Prepared: 02/28/24 Analyzed: 02/29/24				
Naphthalene	4.60	0.50	ug/l	5.00	92	70-130			
n-Butylbenzene	5.07	0.50	ug/l	5.00	101	70-130			
n-Propylbenzene	5.33	0.50	ug/l	5.00	107	70-130			
o-Dichlorobenzene	4.85	0.50	ug/l	5.00	97	70-130			
o-Xylene	5.36	0.50	ug/l	5.00	107	70-130			
p-Dichlorobenzene	5.14	0.50	ug/l	5.00	103	70-130			
p-Isopropyltoluene	4.95	0.50	ug/l	5.00	99	70-130			
sec-Butylbenzene	5.08	0.50	ug/l	5.00	102	70-130			
Styrene	5.20	0.50	ug/l	5.00	104	70-130			
Tert-amyl methyl ether	19.9	2.0	ug/l	20.0	100	70-130			
tert-Butylbenzene	5.25	0.50	ug/l	5.00	105	70-130			
Tetrachloroethene	5.23	0.50	ug/l	5.00	105	70-130			
Toluene	5.10	0.50	ug/l	5.00	102	70-130			
trans-1,2-Dichloroethene	4.49	0.50	ug/l	5.00	90	70-130			
trans-1,3-Dichloropropene	4.70	0.50	ug/l	5.00	94	70-130			
Trichloroethene	4.82	0.50	ug/l	5.00	96	70-130			
Trichlorofluoromethane	4.14	0.50	ug/l	5.00	83	70-130			
Vinyl chloride	4.33	0.50	ug/l	5.00	87	70-130			
<i>Surrogate(s)</i>									
1,2-Dichlorobenzene-d4	51.1		ug/l	50.0	102	70-130			
4-Bromofluorobenzene	51.3		ug/l	50.0	103	70-130			
LCS Dup (W4B2361-BS1)					Prepared: 02/28/24 Analyzed: 02/29/24				
1,1,1,2-Tetrachloroethane	4.48	0.50	ug/l	5.00	90	70-130	1	30	
1,1,1-Trichloroethane	4.76	0.50	ug/l	5.00	95	70-130	0.9	30	
1,1,2,2-Tetrachloroethane	4.27	0.50	ug/l	5.00	85	70-130	4	30	
1,1,2-Trichloroethane	4.41	0.50	ug/l	5.00	88	70-130	4	30	
1,1-Dichloroethane	5.93	0.50	ug/l	5.00	119	70-130	3	30	
1,1-Dichloroethene	4.40	0.50	ug/l	5.00	88	70-130	0.1	30	
1,1-Dichloropropene	4.90	0.50	ug/l	5.00	98	70-130	1	30	
1,2,3-Trichlorobenzene	4.29	0.50	ug/l	5.00	86	70-130	4	30	
1,2,4-Trichlorobenzene	4.61	0.50	ug/l	5.00	92	70-130	1	30	
1,2,4-Trimethylbenzene	4.71	0.50	ug/l	5.00	94	70-130	7	30	
1,2-Dichloroethane	4.66	0.50	ug/l	5.00	93	70-130	2	30	
1,2-Dichloropropane	4.29	0.50	ug/l	5.00	86	70-130	3	30	
1,3,5-Trimethylbenzene	4.67	0.50	ug/l	5.00	93	70-130	11	30	
1,3-Dichloropropane	4.90	0.50	ug/l	5.00	98	70-130	3	30	
2,2-Dichloropropane	3.82	0.50	ug/l	5.00	76	70-130	5	30	
2-Butanone	4.90	5.0	ug/l	5.00	98	70-130	0.2	30	
2-Chlorotoluene	5.11	0.50	ug/l	5.00	102	70-130	5	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)										
LCS Dup (W4B2361-BSD1)										
				Prepared: 02/28/24 Analyzed: 02/29/24						
2-Hexanone	4.99	5.0	ug/l	5.00		100	70-130	18	30	
4-Chlorotoluene	4.96	0.50	ug/l	5.00		99	70-130	6	30	
4-Methyl-2-pentanone	4.07	5.0	ug/l	5.00		81	70-130	4	30	
Benzene	4.93	0.50	ug/l	5.00		99	70-130	6	30	
Bromobenzene	4.14	0.50	ug/l	5.00		83	70-130	21	30	
Bromochloromethane	4.50	0.50	ug/l	5.00		90	70-130	4	30	
Bromodichloromethane	4.47	0.50	ug/l	5.00		89	70-130	2	30	
Bromoform	4.33	0.50	ug/l	5.00		87	70-130	6	30	
Bromomethane	4.50	0.50	ug/l	5.00		90	70-130	18	30	
Carbon tetrachloride	4.59	0.50	ug/l	5.00		92	70-130	6	30	
Chlorobenzene	4.66	0.50	ug/l	5.00		93	70-130	6	30	
Chloroethane	4.55	0.50	ug/l	5.00		91	70-130	8	30	
Chloroform	4.57	0.50	ug/l	5.00		91	70-130	4	30	
Chloromethane	4.56	0.50	ug/l	5.00		91	70-130	7	30	
cis-1,2-Dichloroethene	4.55	0.50	ug/l	5.00		91	70-130	4	30	
cis-1,3-Dichloropropene	4.46	0.50	ug/l	5.00		89	70-130	2	30	
Dibromochloromethane	4.68	0.50	ug/l	5.00		94	70-130	5	30	
Dibromomethane	4.29	0.50	ug/l	5.00		86	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	4.70	0.50	ug/l	5.00		94	70-130	4	30	
Di-isopropyl ether	14.3	2.0	ug/l	20.0		72	70-130	4	30	
Ethyl tert-butyl ether	18.0	2.0	ug/l	20.0		90	70-130	2	30	
Ethylbenzene	4.84	0.50	ug/l	5.00		97	70-130	5	30	
Freon 113	4.23	5.0	ug/l	5.00		85	70-130	2	30	
Hexachlorobutadiene	4.44	0.50	ug/l	5.00		89	70-130	8	30	
Isopropylbenzene	5.02	0.50	ug/l	5.00		100	70-130	9	30	
m,p-Xylene	4.54	0.50	ug/l	5.00		91	70-130	10	30	
m-Dichlorobenzene	4.91	0.50	ug/l	5.00		98	70-130	3	30	
Methyl tert-butyl ether (MTBE)	16.3	2.0	ug/l	20.0		81	70-130	2	30	
Methylene chloride	4.48	0.50	ug/l	5.00		90	70-130	2	30	
Naphthalene	4.28	0.50	ug/l	5.00		86	70-130	7	30	
n-Butylbenzene	4.83	0.50	ug/l	5.00		97	70-130	5	30	
n-Propylbenzene	5.00	0.50	ug/l	5.00		100	70-130	6	30	
o-Dichlorobenzene	4.62	0.50	ug/l	5.00		92	70-130	5	30	
o-Xylene	4.99	0.50	ug/l	5.00		100	70-130	7	30	
p-Dichlorobenzene	4.97	0.50	ug/l	5.00		99	70-130	3	30	
p-Isopropyltoluene	4.63	0.50	ug/l	5.00		93	70-130	7	30	
sec-Butylbenzene	4.63	0.50	ug/l	5.00		93	70-130	9	30	
Styrene	4.79	0.50	ug/l	5.00		96	70-130	8	30	
Tert-amyl methyl ether	19.4	2.0	ug/l	20.0		97	70-130	3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

03/13/2024 10:46

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2361 - EPA 524.2 (Continued)										
LCS Dup (W4B2361-BSD1)										
				Prepared: 02/28/24 Analyzed: 02/29/24						
tert-Butylbenzene	4.95	0.50	ug/l	5.00		99	70-130	6	30	
Tetrachloroethene	4.73	0.50	ug/l	5.00		95	70-130	10	30	
Toluene	4.83	0.50	ug/l	5.00		97	70-130	5	30	
trans-1,2-Dichloroethene	4.33	0.50	ug/l	5.00		87	70-130	4	30	
trans-1,3-Dichloropropene	4.47	0.50	ug/l	5.00		89	70-130	5	30	
Trichloroethene	4.79	0.50	ug/l	5.00		96	70-130	0.6	30	
Trichlorofluoromethane	4.27	0.50	ug/l	5.00		85	70-130	3	30	
Vinyl chloride	4.45	0.50	ug/l	5.00		89	70-130	3	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	49.4		ug/l	50.0		99	70-130			
4-Bromofluorobenzene	49.9		ug/l	50.0		100	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/13/2024 10:46

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B16119

Report Date: 4/29/2024

Received Date: 02/16/2024

Project: City of Santa Monica 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

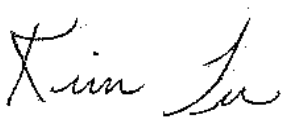
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/16/24 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-5-S4	Brown & Caldwell	4B16119-01	Water	02/16/24 12:00	
AT-GS-5-S7	Brown & Caldwell	4B16119-02	Water	02/16/24 12:03	
AT-RES-5-SZ2	Brown & Caldwell	4B16119-03	Water	02/16/24 13:25	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
Uranium, Total	7440-61-1			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B16119-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	130	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.26	0.0090	0.10	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1160	Preparation: _NONE (METALS)		Prepared: 03/14/24 10:47		Analyst: aln		
Aggressive Index	12.0			AGI	1	03/14/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1462	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:08		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/16/24 18:40	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	0.39	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ISM		
Nitrate as N	5.4	0.040	0.20	mg/l	1	02/17/24 18:11	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:11	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.26	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1464	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:18		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 18:34	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	330	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	400	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.061	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	0.572	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B16119-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	17.4	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	910	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.02	0.10	0.10	pH Units	1	02/16/24 18:15	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	506	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2088	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	150	1.3	10	ug/l	1	02/28/24	
Calcium, Total	115	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	53.4	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	37	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	38	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2090	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.74	0.074	0.40	ug/l	1	02/29/24	
Barium, Total	55	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	0.61	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/29/24	
Iron, Total	24	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	15	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	16	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	2.7	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	3.8	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	110	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	610	0.036	0.20	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B16119-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1468		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:34		Analyst: atd	
Heterotrophic Plate Count	62	2.0	2.0	MPN/mL	1	02/18/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1467		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:45		Analyst: atd	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/18/24	

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B16119-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946		Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM	
Sulfate as SO4	240	0.72	1.5	mg/l	3	03/03/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B16119-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	110	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.28	0.0090	0.10	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1160	Preparation: _NONE (METALS)		Prepared: 03/14/24 10:47		Analyst: aln		
Aggressive Index	12.5			AGI	1	03/14/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1462	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:08		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/16/24 18:40	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	0.59	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.44	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ISM		
Nitrate as N	0.87	0.040	0.20	mg/l	1	02/17/24 18:12	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:12	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.21	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1464	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:18		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 18:34	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	340	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	410	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.593	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	1.10	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B16119-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	64.1	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	960	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.47	0.10	0.10	pH Units	1	02/16/24 18:18	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	576	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2088	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	180	1.3	10	ug/l	1	02/28/24	
Calcium, Total	137	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	56.9	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	40	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2090	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.74	0.074	0.40	ug/l	1	02/29/24	
Barium, Total	52	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	25	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	5.8	3.9	20	ug/l	1	02/29/24	J
Iron, Total	7.3	3.9	20	ug/l	1	02/29/24	J
Lead, Total	1.1	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	3.2	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	2.0	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	87	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	800	0.036	0.20	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B16119-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1468		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:34		Analyst: atd	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/18/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1467		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:45		Analyst: atd	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/18/24	

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B16119-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946		Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM	
Sulfate as SO4	290	0.72	1.5	mg/l	3	03/03/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-RES-5-SZ2

Sampled: 02/16/24 13:25 by Brown & Caldwell

4B16119-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	30	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.78	0.0090	0.10	mg/l	1	03/02/24	
Sulfate as SO4	61	0.24	0.50	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1160	Preparation: _NONE (METALS)		Prepared: 03/14/24 10:47		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/14/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1462	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:08		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/16/24 18:40	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	1.0	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.89	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ISM		
Nitrate as N	0.48	0.040	0.20	mg/l	1	02/17/24 18:13	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:13	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO4, Total	0.050	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1464	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:18		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 18:34	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO3	84	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO3	86	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO3	13	7.2	20	mg/l	1	02/20/24	J
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.279	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-RES-5-SZ2

Sampled: 02/16/24 13:25 by Brown & Caldwell

4B16119-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 60 C	0.796	-20.0	-10.0	LSI	1	03/13/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)		Prepared: 03/14/24 11:12		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	2.42	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 12:32		Analyst: bel		
Total Dissolved Solids	190	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 16:41		Analyst: mes		
pH	8.33	0.10	0.10	pH Units	1	02/16/24 18:21	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/26/24 10:51		Analyst: kvm		
Hardness as CaCO3, Total	108	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2088	Preparation: EPA 200.2		Prepared: 02/26/24 10:51		Analyst: kvm		
Boron, Total	120	1.3	10	ug/l	1	02/28/24	
Calcium, Total	25.7	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	10.7	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	7.8	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	7.8	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090	Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Antimony, Total	ND	0.089	0.50	ug/l	1	02/29/24	
Arsenic, Total	0.27	0.074	0.40	ug/l	1	02/29/24	J
Barium, Total	10	0.14	1.0	ug/l	1	02/29/24	
Beryllium, Total	ND	0.029	0.10	ug/l	1	02/29/24	
Cadmium, Total	ND	0.042	0.20	ug/l	1	02/29/24	
Chromium, Total	0.12	0.089	0.20	ug/l	1	02/29/24	J
Copper, Total	ND	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/29/24	
Iron, Total	ND	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-RES-5-SZ2

Sampled: 02/16/24 13:25 by Brown &
 Caldwell

4B16119-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/29/24	
Nickel, Total	ND	0.40	2.0	ug/l	1	02/29/24	
Potassium, Total	0.76	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	0.42	0.067	0.40	ug/l	1	02/29/24	
Silver, Total	ND	0.027	0.20	ug/l	1	02/29/24	
Sodium, Total	31	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	140	0.036	0.20	ug/l	1	02/29/24	
Thallium, Total	ND	0.021	0.20	ug/l	1	02/29/24	
Uranium, Total	2.4	0.02	0.20	ug/l	1	02/29/24	
Vanadium, Total	0.41	0.16	0.50	ug/l	1	02/29/24	J
Zinc, Total	ND	1.7	10	ug/l	1	02/29/24	

Microbiological Parameters by Standard Methods

Method: SM 9215E			Instr: INC06				
Batch ID: W4B1468		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:34		Analyst: atd	
Heterotrophic Plate Count	2.0	2.0	2.0	MPN/mL	1	02/18/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1467		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:45		Analyst: atd	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/18/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B1946 - EPA 300.0											
Blank (W4B1946-BLK1)											
Prepared: 02/23/24 Analyzed: 03/02/24											
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1946-BS1)											
Prepared: 02/23/24 Analyzed: 03/02/24											
Chloride, Total	20.3	0.19	0.50	mg/l	20.0		102	90-110			
Fluoride, Total	1.99	0.0090	0.10	mg/l	2.00		99	90-110			
Sulfate as SO4	20.2	0.24	0.50	mg/l	20.0		101	90-110			
Matrix Spike (W4B1946-MS1)											
Source: 4B21187-01 Prepared: 02/23/24 Analyzed: 03/02/24											
Chloride, Total	282	1.9	5.0	mg/l	200	65.0	108	76-118			
Fluoride, Total	20.9	0.090	1.0	mg/l	20.0	0.336	103	86-107			
Sulfate as SO4	391	2.4	5.0	mg/l	200	161	115	78-111			MS-01
Matrix Spike (W4B1946-MS2)											
Source: 4B21190-01 Prepared: 02/23/24 Analyzed: 03/03/24											
Chloride, Total	228	1.9	5.0	mg/l	200		114	76-118			
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.283	103	86-107			
Sulfate as SO4	255	2.4	5.0	mg/l	200		128	78-111			
Matrix Spike Dup (W4B1946-MSD1)											
Source: 4B21187-01 Prepared: 02/23/24 Analyzed: 03/02/24											
Chloride, Total	281	1.9	5.0	mg/l	200	65.0	108	76-118	0.4	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.336	103	86-107	0.3	20	
Sulfate as SO4	390	2.4	5.0	mg/l	200	161	114	78-111	0.3	20	MS-01
Matrix Spike Dup (W4B1946-MSD2)											
Source: 4B21190-01 Prepared: 02/23/24 Analyzed: 03/03/24											
Chloride, Total	228	1.9	5.0	mg/l	200		114	76-118	0.2	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.283	103	86-107	0.1	20	
Sulfate as SO4	255	2.4	5.0	mg/l	200		128	78-111	0.04	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1456 - SM 4500H+-B										
LCS (W4B1456-BS1) Prepared & Analyzed: 02/16/24										
pH	6.93	0.10	0.10	pH Units	6.86		101 98.8-101			
Duplicate (W4B1456-DUP1) Source: 4B01037-01 Prepared & Analyzed: 02/16/24										
pH	7.17	0.10	0.10	pH Units		7.07		1	3.1	
Batch: W4B1462 - EPA 140.1										
Blank (W4B1462-BLK1) Prepared & Analyzed: 02/16/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1462-DUP1) Source: 4B16119-01 Prepared & Analyzed: 02/16/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1464 - SM 2120B										
LCS (W4B1464-BS1) Prepared & Analyzed: 02/16/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1464-DUP1) Source: 4B16119-03 Prepared & Analyzed: 02/16/24										
Color	ND		3.0	Color Units		ND			10	
Batch: W4B1473 - EPA 353.2										
Blank (W4B1473-BLK1) Prepared & Analyzed: 02/17/24										
Nitrate as N	ND	0.040	0.20	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B1473-BS1) Prepared & Analyzed: 02/17/24										
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101 90-110			
Nitrite as N	1000	42	100	ug/l	1000		100 90-110			
Matrix Spike (W4B1473-MS1) Source: 4B16114-01 Prepared & Analyzed: 02/17/24										
Nitrate as N	8.83	0.040	0.20	mg/l	2.00	6.86	98 90-110			
Nitrite as N	1010	42	100	ug/l	1000	ND	101 90-110			
Matrix Spike Dup (W4B1473-MSD1) Source: 4B16114-01 Prepared & Analyzed: 02/17/24										
Nitrate as N	8.82	0.040	0.20	mg/l	2.00	6.86	98 90-110	0.1	20	
Nitrite as N	1010	42	100	ug/l	1000	ND	101 90-110	0	20	
Batch: W4B1508 - SM 2320B										
Blank (W4B1508-BLK1) Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	ND	7.2	20	mg/l						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l						
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l						
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l						
LCS (W4B1508-BS1) Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	89.1	7.2	20	mg/l	87.8		101 94-108			
Bicarbonate Alkalinity as HCO3	109	8.8	24	mg/l	107		102 95-108			
Duplicate (W4B1508-DUP1) Source: 4B01037-01 Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	333	7.2	20	mg/l		335		0.6	15	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1508 - SM 2320B (Continued)										
Duplicate (W4B1508-DUP1) Source: 4B01037-01 Prepared & Analyzed: 02/20/24										
Bicarbonate Alkalinity as HCO ₃	406	8.8	24	mg/l		408		0.6	15	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l		ND			200	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l		ND			200	
Batch: W4B1515 - SM 2540C										
Blank (W4B1515-BLK1) Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	ND	4.0	10	mg/l						
LCS (W4B1515-BS1) Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	801	4.0	10	mg/l	824		97 97-103			
Duplicate (W4B1515-DUP1) Source: 4B15148-01 Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	12300	4.0	10	mg/l		12400		1	10	
Duplicate (W4B1515-DUP2) Source: 4B16032-07 Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	1050	4.0	10	mg/l		1070		2	10	
Batch: W4C0522 - EPA 365.3										
Blank (W4C0522-BLK1) Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO ₄ , Total	ND	0.021	0.030	mg/l						
LCS (W4C0522-BS1) Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO ₄ , Total	0.592	0.021	0.030	mg/l	0.612		97 90-110			
Matrix Spike (W4C0522-MS1) Source: 4B15058-07 Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO ₄ , Total	0.611	0.021	0.030	mg/l	0.612	ND	100 90-110			
Matrix Spike Dup (W4C0522-MSD1) Source: 4B15058-07 Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO ₄ , Total	0.501	0.021	0.030	mg/l	0.612	ND	82 90-110	20	20	MS-01
Batch: W4C0696 - EPA 351.2										
Blank (W4C0696-BLK1) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	ND	0.065	0.10	mg/l						
Blank (W4C0696-BLK2) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	ND	0.065	0.10	mg/l						
LCS (W4C0696-BS1) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	0.964	0.065	0.10	mg/l	1.00		96 90-110			
LCS (W4C0696-BS2) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	0.943	0.065	0.10	mg/l	1.00		94 90-110			
Matrix Spike (W4C0696-MS1) Source: 4B16076-04 Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	1.47	0.065	0.10	mg/l	1.00	0.459	101 90-110			
Matrix Spike (W4C0696-MS2) Source: 4B16076-05 Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	2.27	0.065	0.10	mg/l	1.00	1.45	82 90-110			MS-02
Matrix Spike Dup (W4C0696-MSD1) Source: 4B16076-04 Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	1.45	0.065	0.10	mg/l	1.00	0.459	100 90-110	0.9	10	
Matrix Spike Dup (W4C0696-MSD2) Source: 4B16076-05 Prepared: 03/08/24 Analyzed: 03/11/24										

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results (Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0696 - EPA 351.2 (Continued)											
Matrix Spike Dup (W4C0696-MSD2)	Source: 4B16076-05			Prepared: 03/08/24		Analyzed: 03/11/24					
TKN	2.24	0.065	0.10	mg/l	1.00	1.45	79	90-110	1	10	MS-02
Batch: W4C0795 - EPA 350.1											
Blank (W4C0795-BLK1)				Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W4C0795-BLK2)				Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W4C0795-BS1)				Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.246	0.017	0.10	mg/l	0.250		99	90-110			
LCS (W4C0795-BS2)				Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.249	0.017	0.10	mg/l	0.250		99	90-110			
Matrix Spike (W4C0795-MS1)	Source: 4B02004-01			Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	0.0182	95	90-110			
Matrix Spike (W4C0795-MS2)	Source: 4B16076-04			Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.349	0.017	0.10	mg/l	0.250	0.106	97	90-110			
Matrix Spike Dup (W4C0795-MSD1)	Source: 4B02004-01			Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	0.0182	95	90-110	0.3	15	
Matrix Spike Dup (W4C0795-MSD2)	Source: 4B16076-04			Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.346	0.017	0.10	mg/l	0.250	0.106	96	90-110	0.9	15	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2088 - EPA 200.7									
Blank (W4B2088-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	2.12	1.3	10	ug/l					J
Calcium, Total	ND	0.0240	0.500	mg/l					
Magnesium, Total	ND	0.0148	0.500	mg/l					
Silica as SiO ₂ , Dissolved	ND	0.0086	0.10	mg/l					
Silica as SiO ₂ , Total	ND	0.0086	0.10	mg/l					
LCS (W4B2088-BS1)					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	227	1.3	10	ug/l	200	113	85-115		
Calcium, Total	48.1	0.0240	0.500	mg/l	50.2	96	85-115		
Magnesium, Total	48.1	0.0148	0.500	mg/l	50.2	96	85-115		
Silica as SiO ₂ , Dissolved	44.0	0.0086	0.10	mg/l	43.2	102	85-115		
Silica as SiO ₂ , Total	44.0	0.0086	0.10	mg/l	43.2	102	85-115		
Matrix Spike (W4B2088-MS1) Source: 4B16119-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	380	1.3	10	ug/l	200	148	116	70-130	
Calcium, Total	160	0.0240	0.500	mg/l	50.2	115	91	70-130	
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	53.4	95	70-130	
Silica as SiO ₂ , Dissolved	82.4	0.0086	0.10	mg/l	43.2	37.4	104	70-130	
Silica as SiO ₂ , Total	82.4	0.0086	0.10	mg/l	43.2	38.2	102	70-130	
Matrix Spike (W4B2088-MS2) Source: 4B20048-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	370	1.3	10	ug/l	200	148	111	70-130	
Calcium, Total	155	0.0240	0.500	mg/l	50.2	112	86	70-130	
Magnesium, Total	97.9	0.0148	0.500	mg/l	50.2	52.1	91	70-130	
Silica as SiO ₂ , Dissolved	79.6	0.0086	0.10	mg/l	43.2	37.8	97	70-130	
Silica as SiO ₂ , Total	79.6	0.0086	0.10	mg/l	43.2	37.3	98	70-130	
Matrix Spike Dup (W4B2088-MSD1) Source: 4B16119-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	371	1.3	10	ug/l	200	148	111	70-130	3 30
Calcium, Total	156	0.0240	0.500	mg/l	50.2	115	83	70-130	3 30
Magnesium, Total	98.4	0.0148	0.500	mg/l	50.2	53.4	90	70-130	3 30
Silica as SiO ₂ , Dissolved	80.5	0.0086	0.10	mg/l	43.2	37.4	100	70-130	2 30
Silica as SiO ₂ , Total	80.5	0.0086	0.10	mg/l	43.2	38.2	98	70-130	2 30
Matrix Spike Dup (W4B2088-MSD2) Source: 4B20048-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	382	1.3	10	ug/l	200	148	117	70-130	3 30
Calcium, Total	160	0.0240	0.500	mg/l	50.2	112	96	70-130	3 30
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.1	97	70-130	3 30
Silica as SiO ₂ , Dissolved	82.8	0.0086	0.10	mg/l	43.2	37.8	104	70-130	4 30
Silica as SiO ₂ , Total	82.8	0.0086	0.10	mg/l	43.2	37.3	105	70-130	4 30
Batch: W4B2090 - EPA 200.8									
Blank (W4B2090-BLK1)					Prepared: 02/26/24 Analyzed: 02/29/24				
Aluminum, Total	ND	4.4	20	ug/l					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
---------	--------	-----	-----	-------	-------------	---------------	------	-------	-----	-----------	-----------

Batch: W4B2090 - EPA 200.8 (Continued)

Blank (W4B2090-BLK1)

Prepared: 02/26/24 Analyzed: 02/29/24

Antimony, Total	ND	0.089	0.50	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Beryllium, Total	ND	0.029	0.10	ug/l							
Cadmium, Total	ND	0.042	0.20	ug/l							
Chromium, Total	ND	0.089	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Nickel, Total	ND	0.40	2.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Silver, Total	ND	0.027	0.20	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
Thallium, Total	ND	0.021	0.20	ug/l							
Uranium, Total	ND	0.02	0.20	ug/l							
Vanadium, Total	ND	0.16	0.50	ug/l							
Zinc, Total	ND	1.7	10	ug/l							

LCS (W4B2090-BS1)

Prepared: 02/26/24 Analyzed: 02/29/24

Aluminum, Total	47.6	4.4	20	ug/l	50.0		95	85-115			
Antimony, Total	48.8	0.089	0.50	ug/l	50.0		98	85-115			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	48.6	0.14	1.0	ug/l	50.0		97	85-115			
Beryllium, Total	49.7	0.029	0.10	ug/l	50.0		99	85-115			
Cadmium, Total	49.8	0.042	0.20	ug/l	50.0		100	85-115			
Chromium, Total	50.7	0.089	0.20	ug/l	50.0		101	85-115			
Copper, Total	51.1	0.23	0.50	ug/l	50.0		102	85-115			
Iron, Dissolved	1200	3.9	20	ug/l	1050		115	85-115			
Iron, Total	1200	3.9	20	ug/l	1050		115	85-115			
Lead, Total	49.7	0.083	0.20	ug/l	50.0		99	85-115			
Manganese, Dissolved	50.2	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	50.2	0.23	1.0	ug/l	50.0		100	85-115			
Nickel, Total	51.5	0.40	2.0	ug/l	50.0		103	85-115			
Potassium, Total	2.17	0.068	0.50	mg/l	2.05		106	85-115			
Selenium, Total	49.4	0.067	0.40	ug/l	50.0		99	85-115			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-----	-------	-------------	---------------	------	--------	-----	-----------	-----------

Batch: W4B2090 - EPA 200.8 (Continued)

LCS (W4B2090-BS1)

Prepared: 02/26/24 Analyzed: 02/29/24

Silver, Total	50.1	0.027	0.20	ug/l	50.0		100	85-115			
Sodium, Total	2.20	0.10	1.0	mg/l	2.05		107	85-115			
Strontium, Total	49.4	0.036	0.20	ug/l	50.0		99	85-115			
Thallium, Total	49.3	0.021	0.20	ug/l	50.0		99	85-115			
Uranium, Total	48.1	0.02	0.20	ug/l	50.0		96	85-115			
Vanadium, Total	50.6	0.16	0.50	ug/l	50.0		101	85-115			
Zinc, Total	51.6	1.7	10	ug/l	50.0		103	85-115			

Matrix Spike (W4B2090-MS1)

Source: 4B16119-03

Prepared: 02/26/24 Analyzed: 02/29/24

Aluminum, Total	46.8	4.4	20	ug/l	50.0	ND	93	70-130			
Antimony, Total	50.0	0.089	0.50	ug/l	50.0	ND	100	70-130			
Arsenic, Total	51.3	0.074	0.40	ug/l	50.0	0.272	102	70-130			
Barium, Total	59.6	0.14	1.0	ug/l	50.0	10.3	99	70-130			
Beryllium, Total	50.9	0.029	0.10	ug/l	50.0	ND	102	70-130			
Cadmium, Total	49.5	0.042	0.20	ug/l	50.0	ND	99	70-130			
Chromium, Total	49.6	0.089	0.20	ug/l	50.0	0.123	99	70-130			
Copper, Total	48.9	0.23	0.50	ug/l	50.0	ND	98	70-130			
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130			
Iron, Total	1140	3.9	20	ug/l	1050	ND	109	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	49.2	0.11	1.0	ug/l	50.0	ND	98	70-130			
Manganese, Total	49.2	0.23	1.0	ug/l	50.0	ND	98	70-130			
Nickel, Total	48.8	0.40	2.0	ug/l	50.0	ND	97	70-130			
Potassium, Total	2.83	0.068	0.50	mg/l	2.05	0.757	101	70-130			
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	0.422	99	70-130			
Silver, Total	49.5	0.027	0.20	ug/l	50.0	ND	99	70-130			
Sodium, Total	31.0	0.10	1.0	mg/l	2.05	31.0	0.6	70-130			MS-02
Strontium, Total	187	0.036	0.20	ug/l	50.0	136	101	70-130			
Thallium, Total	50.2	0.021	0.20	ug/l	50.0	ND	100	70-130			
Uranium, Total	52.5	0.02	0.20	ug/l	50.0	2.37	100	70-130			
Vanadium, Total	50.6	0.16	0.50	ug/l	50.0	0.406	100	70-130			
Zinc, Total	49.9	1.7	10	ug/l	50.0	ND	100	70-130			

Matrix Spike (W4B2090-MS2)

Source: 4B20053-01

Prepared: 02/26/24 Analyzed: 02/29/24

Aluminum, Total	46.9	4.4	20	ug/l	50.0	ND	94	70-130			
Antimony, Total	50.7	0.089	0.50	ug/l	50.0	0.271	101	70-130			
Arsenic, Total	51.7	0.074	0.40	ug/l	50.0	0.716	102	70-130			
Barium, Total	107	0.14	1.0	ug/l	50.0	55.2	103	70-130			
Beryllium, Total	49.1	0.029	0.10	ug/l	50.0	ND	98	70-130			
Cadmium, Total	49.5	0.042	0.20	ug/l	50.0	0.0425	99	70-130			
Chromium, Total	51.9	0.089	0.20	ug/l	50.0	2.50	99	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike (W4B2090-MS2)			Source: 4B20053-01			Prepared: 02/26/24			Analyzed: 02/29/24		
Copper, Total	48.1	0.23	0.50	ug/l	50.0	ND	96	70-130			
Iron, Dissolved	1170	3.9	20	ug/l	1050	ND	111	70-130			
Iron, Total	1170	3.9	20	ug/l	1050	29.7	108	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	66.2	0.11	1.0	ug/l	50.0	18.1	96	70-130			
Manganese, Total	66.2	0.23	1.0	ug/l	50.0	18.6	95	70-130			
Nickel, Total	50.0	0.40	2.0	ug/l	50.0	2.23	96	70-130			
Potassium, Total	4.71	0.068	0.50	mg/l	2.05	2.72	97	70-130			
Selenium, Total	52.2	0.067	0.40	ug/l	50.0	3.78	97	70-130			
Silver, Total	48.8	0.027	0.20	ug/l	50.0	ND	98	70-130			
Sodium, Total	107	0.10	1.0	mg/l	2.05	109	NR	70-130			MS-02
Strontium, Total	645	0.036	0.20	ug/l	50.0	599	93	70-130			
Thallium, Total	50.2	0.021	0.20	ug/l	50.0	ND	100	70-130			
Uranium, Total	71.3	0.02	0.20	ug/l	50.0	19.9	103	70-130			
Vanadium, Total	55.4	0.16	0.50	ug/l	50.0	5.06	101	70-130			
Zinc, Total	48.5	1.7	10	ug/l	50.0	ND	97	70-130			
Matrix Spike Dup (W4B2090-MSD1)			Source: 4B16119-03			Prepared: 02/26/24			Analyzed: 02/29/24		
Aluminum, Total	46.6	4.4	20	ug/l	50.0	ND	93	70-130	0.3	30	
Antimony, Total	50.0	0.089	0.50	ug/l	50.0	ND	100	70-130	0.06	30	
Arsenic, Total	50.8	0.074	0.40	ug/l	50.0	0.272	101	70-130	1	30	
Barium, Total	60.0	0.14	1.0	ug/l	50.0	10.3	99	70-130	0.6	30	
Beryllium, Total	50.2	0.029	0.10	ug/l	50.0	ND	100	70-130	1	30	
Cadmium, Total	49.6	0.042	0.20	ug/l	50.0	ND	99	70-130	0.2	30	
Chromium, Total	50.5	0.089	0.20	ug/l	50.0	0.123	101	70-130	2	30	
Copper, Total	50.1	0.23	0.50	ug/l	50.0	ND	100	70-130	2	30	
Iron, Dissolved	1180	3.9	20	ug/l	1050	ND	113	70-130	4	30	
Iron, Total	1180	3.9	20	ug/l	1050	ND	113	70-130	4	30	
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101	70-130	0.2	30	
Manganese, Dissolved	50.1	0.11	1.0	ug/l	50.0	ND	100	70-130	2	30	
Manganese, Total	50.1	0.23	1.0	ug/l	50.0	ND	100	70-130	2	30	
Nickel, Total	49.6	0.40	2.0	ug/l	50.0	ND	99	70-130	2	30	
Potassium, Total	2.88	0.068	0.50	mg/l	2.05	0.757	103	70-130	2	30	
Selenium, Total	49.0	0.067	0.40	ug/l	50.0	0.422	97	70-130	2	30	
Silver, Total	49.4	0.027	0.20	ug/l	50.0	ND	99	70-130	0.3	30	
Sodium, Total	31.9	0.10	1.0	mg/l	2.05	31.0	48	70-130	3	30	MS-02
Strontium, Total	186	0.036	0.20	ug/l	50.0	136	99	70-130	0.5	30	
Thallium, Total	50.0	0.021	0.20	ug/l	50.0	ND	100	70-130	0.4	30	
Uranium, Total	52.2	0.02	0.20	ug/l	50.0	2.37	100	70-130	0.5	30	
Vanadium, Total	50.8	0.16	0.50	ug/l	50.0	0.406	101	70-130	0.3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B2090-MSD1) Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24											
Zinc, Total	49.3	1.7	10	ug/l	50.0	ND	98	70-130	1	30	
Matrix Spike Dup (W4B2090-MSD2) Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24											
Aluminum, Total	47.2	4.4	20	ug/l	50.0	ND	94	70-130	0.5	30	
Antimony, Total	50.2	0.089	0.50	ug/l	50.0	0.271	100	70-130	1	30	
Arsenic, Total	51.0	0.074	0.40	ug/l	50.0	0.716	100	70-130	1	30	
Barium, Total	106	0.14	1.0	ug/l	50.0	55.2	100	70-130	1	30	
Beryllium, Total	49.6	0.029	0.10	ug/l	50.0	ND	99	70-130	1	30	
Cadmium, Total	48.4	0.042	0.20	ug/l	50.0	0.0425	97	70-130	2	30	
Chromium, Total	52.1	0.089	0.20	ug/l	50.0	2.50	99	70-130	0.2	30	
Copper, Total	48.6	0.23	0.50	ug/l	50.0	ND	97	70-130	1	30	
Iron, Dissolved	1200	3.9	20	ug/l	1050	ND	114	70-130	3	30	
Iron, Total	1200	3.9	20	ug/l	1050	29.7	111	70-130	3	30	
Lead, Total	49.7	0.083	0.20	ug/l	50.0	ND	99	70-130	1	30	
Manganese, Dissolved	66.5	0.11	1.0	ug/l	50.0	18.1	97	70-130	0.5	30	
Manganese, Total	66.5	0.23	1.0	ug/l	50.0	18.6	96	70-130	0.5	30	
Nickel, Total	50.5	0.40	2.0	ug/l	50.0	2.23	96	70-130	0.8	30	
Potassium, Total	4.75	0.068	0.50	mg/l	2.05	2.72	99	70-130	0.8	30	
Selenium, Total	51.9	0.067	0.40	ug/l	50.0	3.78	96	70-130	0.7	30	
Silver, Total	48.5	0.027	0.20	ug/l	50.0	ND	97	70-130	0.7	30	
Sodium, Total	107	0.10	1.0	mg/l	2.05	109	NR	70-130	0.02	30	MS-02
Strontium, Total	639	0.036	0.20	ug/l	50.0	599	81	70-130	1	30	
Thallium, Total	49.6	0.021	0.20	ug/l	50.0	ND	99	70-130	1	30	
Uranium, Total	70.3	0.02	0.20	ug/l	50.0	19.9	101	70-130	1	30	
Vanadium, Total	55.7	0.16	0.50	ug/l	50.0	5.06	101	70-130	0.6	30	
Zinc, Total	48.3	1.7	10	ug/l	50.0	ND	97	70-130	0.2	30	

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1467 - SM 9221B											
Blank (W4B1467-BLK1) Prepared: 02/16/24 Analyzed: 02/18/24											
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Calculation is based on source temperature @20C
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B16119

Report Date: 4/29/2024

Received Date: 02/16/2024

Project: City of Santa Monica 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

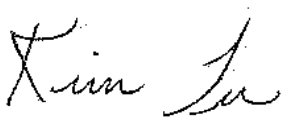
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/16/24 with the Chain-of-Custody document. The samples were received in good condition, at 4.9 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-5-S4	Brown & Caldwell	4B16119-01	Water	02/16/24 12:00	
AT-GS-5-S7	Brown & Caldwell	4B16119-02	Water	02/16/24 12:03	
AT-RES-5-SZ2	Brown & Caldwell	4B16119-03	Water	02/16/24 13:25	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
Uranium, Total	7440-61-1			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B16119-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	130	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.26	0.0090	0.10	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1160	Preparation: _NONE (METALS)		Prepared: 03/14/24 10:47		Analyst: aln		
Aggressive Index	12.0			AGI	1	03/14/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1462	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:08		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/16/24 18:40	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	0.39	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ISM		
Nitrate as N	5.4	0.040	0.20	mg/l	1	02/17/24 18:11	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:11	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.26	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1464	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:18		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 18:34	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	330	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	400	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.061	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	0.572	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B16119-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)			Prepared: 03/12/24 16:29			Analyst: aln
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)			Prepared: 03/14/24 11:12			Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	17.4	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)			Prepared: 02/20/24 12:32			Analyst: bel
Total Dissolved Solids	910	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B				Instr: AA02			
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)			Prepared: 02/16/24 16:41			Analyst: mes
pH	7.02	0.10	0.10	pH Units	1	02/16/24 18:15	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 02/26/24 10:51			Analyst: kvm
Hardness as CaCO3, Total	506	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2088	Preparation: EPA 200.2			Prepared: 02/26/24 10:51			Analyst: kvm
Boron, Total	150	1.3	10	ug/l	1	02/28/24	
Calcium, Total	115	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	53.4	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	37	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	38	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090	Preparation: EPA 200.2			Prepared: 02/26/24 13:50			Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.74	0.074	0.40	ug/l	1	02/29/24	
Barium, Total	55	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	0.61	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/29/24	
Iron, Total	24	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	15	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	16	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	2.7	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	3.8	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	110	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	610	0.036	0.20	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B16119-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1468		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:34		Analyst: atd	
Heterotrophic Plate Count	62	2.0	2.0	MPN/mL	1	02/18/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1467		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:45		Analyst: atd	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/18/24	

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B16119-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946		Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM	
Sulfate as SO4	240	0.72	1.5	mg/l	3	03/03/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B16119-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	110	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.28	0.0090	0.10	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1160	Preparation: _NONE (METALS)		Prepared: 03/14/24 10:47		Analyst: aln		
Aggressive Index	12.5			AGI	1	03/14/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1462	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:08		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/16/24 18:40	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	0.59	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.44	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ISM		
Nitrate as N	0.87	0.040	0.20	mg/l	1	02/17/24 18:12	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:12	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.21	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1464	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:18		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 18:34	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	340	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	410	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.593	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	1.10	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B16119-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	64.1	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	960	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.47	0.10	0.10	pH Units	1	02/16/24 18:18	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	576	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2088	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	180	1.3	10	ug/l	1	02/28/24	
Calcium, Total	137	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	56.9	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	40	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2090	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.74	0.074	0.40	ug/l	1	02/29/24	
Barium, Total	52	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	25	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	5.8	3.9	20	ug/l	1	02/29/24	J
Iron, Total	7.3	3.9	20	ug/l	1	02/29/24	J
Lead, Total	1.1	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	3.2	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	2.0	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	87	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	800	0.036	0.20	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B16119-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1468		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:34		Analyst: atd	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/18/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1467		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:45		Analyst: atd	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/18/24	

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B16119-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946		Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM	
Sulfate as SO4	290	0.72	1.5	mg/l	3	03/03/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-RES-5-SZ2

Sampled: 02/16/24 13:25 by Brown & Caldwell

4B16119-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	30	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.78	0.0090	0.10	mg/l	1	03/02/24	
Sulfate as SO4	61	0.24	0.50	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1160	Preparation: _NONE (METALS)		Prepared: 03/14/24 10:47		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/14/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1462	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:08		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/16/24 18:40	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	1.0	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.89	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ISM		
Nitrate as N	0.48	0.040	0.20	mg/l	1	02/17/24 18:13	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:13	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO4, Total	0.050	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1464	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 18:18		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 18:34	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO3	84	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO3	86	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO3	13	7.2	20	mg/l	1	02/20/24	J
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.279	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-RES-5-SZ2

Sampled: 02/16/24 13:25 by Brown & Caldwell

4B16119-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 60 C	0.796	-20.0	-10.0	LSI	1	03/13/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)		Prepared: 03/14/24 11:12		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	2.42	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 12:32		Analyst: bel		
Total Dissolved Solids	190	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 16:41		Analyst: mes		
pH	8.33	0.10	0.10	pH Units	1	02/16/24 18:21	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/26/24 10:51		Analyst: kvm		
Hardness as CaCO3, Total	108	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2088	Preparation: EPA 200.2		Prepared: 02/26/24 10:51		Analyst: kvm		
Boron, Total	120	1.3	10	ug/l	1	02/28/24	
Calcium, Total	25.7	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	10.7	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	7.8	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	7.8	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090	Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Antimony, Total	ND	0.089	0.50	ug/l	1	02/29/24	
Arsenic, Total	0.27	0.074	0.40	ug/l	1	02/29/24	J
Barium, Total	10	0.14	1.0	ug/l	1	02/29/24	
Beryllium, Total	ND	0.029	0.10	ug/l	1	02/29/24	
Cadmium, Total	ND	0.042	0.20	ug/l	1	02/29/24	
Chromium, Total	0.12	0.089	0.20	ug/l	1	02/29/24	J
Copper, Total	ND	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/29/24	
Iron, Total	ND	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Sample Results

(Continued)

Sample: AT-RES-5-SZ2

Sampled: 02/16/24 13:25 by Brown &
 Caldwell

4B16119-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/29/24	
Nickel, Total	ND	0.40	2.0	ug/l	1	02/29/24	
Potassium, Total	0.76	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	0.42	0.067	0.40	ug/l	1	02/29/24	
Silver, Total	ND	0.027	0.20	ug/l	1	02/29/24	
Sodium, Total	31	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	140	0.036	0.20	ug/l	1	02/29/24	
Thallium, Total	ND	0.021	0.20	ug/l	1	02/29/24	
Uranium, Total	2.4	0.02	0.20	ug/l	1	02/29/24	
Vanadium, Total	0.41	0.16	0.50	ug/l	1	02/29/24	J
Zinc, Total	ND	1.7	10	ug/l	1	02/29/24	

Microbiological Parameters by Standard Methods

Method: SM 9215E				Instr: INC06			
Batch ID: W4B1468		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:34		Analyst: atd	
Heterotrophic Plate Count	2.0	2.0	2.0	MPN/mL	1	02/18/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1467		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/16/24 18:45		Analyst: atd	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/18/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B1946 - EPA 300.0											
Blank (W4B1946-BLK1)											
Prepared: 02/23/24 Analyzed: 03/02/24											
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1946-BS1)											
Prepared: 02/23/24 Analyzed: 03/02/24											
Chloride, Total	20.3	0.19	0.50	mg/l	20.0		102	90-110			
Fluoride, Total	1.99	0.0090	0.10	mg/l	2.00		99	90-110			
Sulfate as SO4	20.2	0.24	0.50	mg/l	20.0		101	90-110			
Matrix Spike (W4B1946-MS1)											
Source: 4B21187-01 Prepared: 02/23/24 Analyzed: 03/02/24											
Chloride, Total	282	1.9	5.0	mg/l	200	65.0	108	76-118			
Fluoride, Total	20.9	0.090	1.0	mg/l	20.0	0.336	103	86-107			
Sulfate as SO4	391	2.4	5.0	mg/l	200	161	115	78-111			MS-01
Matrix Spike (W4B1946-MS2)											
Source: 4B21190-01 Prepared: 02/23/24 Analyzed: 03/03/24											
Chloride, Total	228	1.9	5.0	mg/l	200		114	76-118			
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.283	103	86-107			
Sulfate as SO4	255	2.4	5.0	mg/l	200		128	78-111			
Matrix Spike Dup (W4B1946-MSD1)											
Source: 4B21187-01 Prepared: 02/23/24 Analyzed: 03/02/24											
Chloride, Total	281	1.9	5.0	mg/l	200	65.0	108	76-118	0.4	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.336	103	86-107	0.3	20	
Sulfate as SO4	390	2.4	5.0	mg/l	200	161	114	78-111	0.3	20	MS-01
Matrix Spike Dup (W4B1946-MSD2)											
Source: 4B21190-01 Prepared: 02/23/24 Analyzed: 03/03/24											
Chloride, Total	228	1.9	5.0	mg/l	200		114	76-118	0.2	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.283	103	86-107	0.1	20	
Sulfate as SO4	255	2.4	5.0	mg/l	200		128	78-111	0.04	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1456 - SM 4500H+-B										
LCS (W4B1456-BS1) Prepared & Analyzed: 02/16/24										
pH	6.93	0.10	0.10	pH Units	6.86		101 98.8-101			
Duplicate (W4B1456-DUP1) Source: 4B01037-01 Prepared & Analyzed: 02/16/24										
pH	7.17	0.10	0.10	pH Units		7.07		1	3.1	
Batch: W4B1462 - EPA 140.1										
Blank (W4B1462-BLK1) Prepared & Analyzed: 02/16/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1462-DUP1) Source: 4B16119-01 Prepared & Analyzed: 02/16/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1464 - SM 2120B										
LCS (W4B1464-BS1) Prepared & Analyzed: 02/16/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1464-DUP1) Source: 4B16119-03 Prepared & Analyzed: 02/16/24										
Color	ND		3.0	Color Units		ND			10	
Batch: W4B1473 - EPA 353.2										
Blank (W4B1473-BLK1) Prepared & Analyzed: 02/17/24										
Nitrate as N	ND	0.040	0.20	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B1473-BS1) Prepared & Analyzed: 02/17/24										
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101 90-110			
Nitrite as N	1000	42	100	ug/l	1000		100 90-110			
Matrix Spike (W4B1473-MS1) Source: 4B16114-01 Prepared & Analyzed: 02/17/24										
Nitrate as N	8.83	0.040	0.20	mg/l	2.00	6.86	98 90-110			
Nitrite as N	1010	42	100	ug/l	1000	ND	101 90-110			
Matrix Spike Dup (W4B1473-MSD1) Source: 4B16114-01 Prepared & Analyzed: 02/17/24										
Nitrate as N	8.82	0.040	0.20	mg/l	2.00	6.86	98 90-110	0.1	20	
Nitrite as N	1010	42	100	ug/l	1000	ND	101 90-110	0	20	
Batch: W4B1508 - SM 2320B										
Blank (W4B1508-BLK1) Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	ND	7.2	20	mg/l						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l						
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l						
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l						
LCS (W4B1508-BS1) Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	89.1	7.2	20	mg/l	87.8		101 94-108			
Bicarbonate Alkalinity as HCO3	109	8.8	24	mg/l	107		102 95-108			
Duplicate (W4B1508-DUP1) Source: 4B01037-01 Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	333	7.2	20	mg/l		335		0.6	15	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1508 - SM 2320B (Continued)										
Duplicate (W4B1508-DUP1) Source: 4B01037-01 Prepared & Analyzed: 02/20/24										
Bicarbonate Alkalinity as HCO ₃	406	8.8	24	mg/l		408		0.6	15	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l		ND			200	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l		ND			200	
Batch: W4B1515 - SM 2540C										
Blank (W4B1515-BLK1) Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	ND	4.0	10	mg/l						
LCS (W4B1515-BS1) Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	801	4.0	10	mg/l	824		97 97-103			
Duplicate (W4B1515-DUP1) Source: 4B15148-01 Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	12300	4.0	10	mg/l		12400		1	10	
Duplicate (W4B1515-DUP2) Source: 4B16032-07 Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	1050	4.0	10	mg/l		1070		2	10	
Batch: W4C0522 - EPA 365.3										
Blank (W4C0522-BLK1) Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO ₄ , Total	ND	0.021	0.030	mg/l						
LCS (W4C0522-BS1) Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO ₄ , Total	0.592	0.021	0.030	mg/l	0.612		97 90-110			
Matrix Spike (W4C0522-MS1) Source: 4B15058-07 Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO ₄ , Total	0.611	0.021	0.030	mg/l	0.612	ND	100 90-110			
Matrix Spike Dup (W4C0522-MSD1) Source: 4B15058-07 Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO ₄ , Total	0.501	0.021	0.030	mg/l	0.612	ND	82 90-110	20	20	MS-01
Batch: W4C0696 - EPA 351.2										
Blank (W4C0696-BLK1) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	ND	0.065	0.10	mg/l						
Blank (W4C0696-BLK2) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	ND	0.065	0.10	mg/l						
LCS (W4C0696-BS1) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	0.964	0.065	0.10	mg/l	1.00		96 90-110			
LCS (W4C0696-BS2) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	0.943	0.065	0.10	mg/l	1.00		94 90-110			
Matrix Spike (W4C0696-MS1) Source: 4B16076-04 Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	1.47	0.065	0.10	mg/l	1.00	0.459	101 90-110			
Matrix Spike (W4C0696-MS2) Source: 4B16076-05 Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	2.27	0.065	0.10	mg/l	1.00	1.45	82 90-110			MS-02
Matrix Spike Dup (W4C0696-MSD1) Source: 4B16076-04 Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	1.45	0.065	0.10	mg/l	1.00	0.459	100 90-110	0.9	10	
Matrix Spike Dup (W4C0696-MSD2) Source: 4B16076-05 Prepared: 03/08/24 Analyzed: 03/11/24										

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results (Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0696 - EPA 351.2 (Continued)											
Matrix Spike Dup (W4C0696-MSD2)	Source: 4B16076-05			Prepared: 03/08/24		Analyzed: 03/11/24					
TKN	2.24	0.065	0.10	mg/l	1.00	1.45	79	90-110	1	10	MS-02
Batch: W4C0795 - EPA 350.1											
Blank (W4C0795-BLK1)				Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W4C0795-BLK2)				Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W4C0795-BS1)				Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.246	0.017	0.10	mg/l	0.250		99	90-110			
LCS (W4C0795-BS2)				Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.249	0.017	0.10	mg/l	0.250		99	90-110			
Matrix Spike (W4C0795-MS1)	Source: 4B02004-01			Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	0.0182	95	90-110			
Matrix Spike (W4C0795-MS2)	Source: 4B16076-04			Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.349	0.017	0.10	mg/l	0.250	0.106	97	90-110			
Matrix Spike Dup (W4C0795-MSD1)	Source: 4B02004-01			Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	0.0182	95	90-110	0.3	15	
Matrix Spike Dup (W4C0795-MSD2)	Source: 4B16076-04			Prepared: 03/11/24		Analyzed: 03/12/24					
Ammonia as N	0.346	0.017	0.10	mg/l	0.250	0.106	96	90-110	0.9	15	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
04/29/2024 13:26

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2088 - EPA 200.7									
Blank (W4B2088-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	2.12	1.3	10	ug/l					J
Calcium, Total	ND	0.0240	0.500	mg/l					
Magnesium, Total	ND	0.0148	0.500	mg/l					
Silica as SiO ₂ , Dissolved	ND	0.0086	0.10	mg/l					
Silica as SiO ₂ , Total	ND	0.0086	0.10	mg/l					
LCS (W4B2088-BS1)					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	227	1.3	10	ug/l	200	113	85-115		
Calcium, Total	48.1	0.0240	0.500	mg/l	50.2	96	85-115		
Magnesium, Total	48.1	0.0148	0.500	mg/l	50.2	96	85-115		
Silica as SiO ₂ , Dissolved	44.0	0.0086	0.10	mg/l	43.2	102	85-115		
Silica as SiO ₂ , Total	44.0	0.0086	0.10	mg/l	43.2	102	85-115		
Matrix Spike (W4B2088-MS1) Source: 4B16119-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	380	1.3	10	ug/l	200	148	116	70-130	
Calcium, Total	160	0.0240	0.500	mg/l	50.2	115	91	70-130	
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	53.4	95	70-130	
Silica as SiO ₂ , Dissolved	82.4	0.0086	0.10	mg/l	43.2	37.4	104	70-130	
Silica as SiO ₂ , Total	82.4	0.0086	0.10	mg/l	43.2	38.2	102	70-130	
Matrix Spike (W4B2088-MS2) Source: 4B20048-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	370	1.3	10	ug/l	200	148	111	70-130	
Calcium, Total	155	0.0240	0.500	mg/l	50.2	112	86	70-130	
Magnesium, Total	97.9	0.0148	0.500	mg/l	50.2	52.1	91	70-130	
Silica as SiO ₂ , Dissolved	79.6	0.0086	0.10	mg/l	43.2	37.8	97	70-130	
Silica as SiO ₂ , Total	79.6	0.0086	0.10	mg/l	43.2	37.3	98	70-130	
Matrix Spike Dup (W4B2088-MSD1) Source: 4B16119-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	371	1.3	10	ug/l	200	148	111	70-130	3 30
Calcium, Total	156	0.0240	0.500	mg/l	50.2	115	83	70-130	3 30
Magnesium, Total	98.4	0.0148	0.500	mg/l	50.2	53.4	90	70-130	3 30
Silica as SiO ₂ , Dissolved	80.5	0.0086	0.10	mg/l	43.2	37.4	100	70-130	2 30
Silica as SiO ₂ , Total	80.5	0.0086	0.10	mg/l	43.2	38.2	98	70-130	2 30
Matrix Spike Dup (W4B2088-MSD2) Source: 4B20048-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	382	1.3	10	ug/l	200	148	117	70-130	3 30
Calcium, Total	160	0.0240	0.500	mg/l	50.2	112	96	70-130	3 30
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.1	97	70-130	3 30
Silica as SiO ₂ , Dissolved	82.8	0.0086	0.10	mg/l	43.2	37.8	104	70-130	4 30
Silica as SiO ₂ , Total	82.8	0.0086	0.10	mg/l	43.2	37.3	105	70-130	4 30
Batch: W4B2090 - EPA 200.8									
Blank (W4B2090-BLK1)					Prepared: 02/26/24 Analyzed: 02/29/24				
Aluminum, Total	ND	4.4	20	ug/l					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Blank (W4B2090-BLK1)						Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	ND	0.089	0.50	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Beryllium, Total	ND	0.029	0.10	ug/l							
Cadmium, Total	ND	0.042	0.20	ug/l							
Chromium, Total	ND	0.089	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Nickel, Total	ND	0.40	2.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Silver, Total	ND	0.027	0.20	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
Thallium, Total	ND	0.021	0.20	ug/l							
Uranium, Total	ND	0.02	0.20	ug/l							
Vanadium, Total	ND	0.16	0.50	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W4B2090-BS1)						Prepared: 02/26/24 Analyzed: 02/29/24					
Aluminum, Total	47.6	4.4	20	ug/l	50.0		95	85-115			
Antimony, Total	48.8	0.089	0.50	ug/l	50.0		98	85-115			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	48.6	0.14	1.0	ug/l	50.0		97	85-115			
Beryllium, Total	49.7	0.029	0.10	ug/l	50.0		99	85-115			
Cadmium, Total	49.8	0.042	0.20	ug/l	50.0		100	85-115			
Chromium, Total	50.7	0.089	0.20	ug/l	50.0		101	85-115			
Copper, Total	51.1	0.23	0.50	ug/l	50.0		102	85-115			
Iron, Dissolved	1200	3.9	20	ug/l	1050		115	85-115			
Iron, Total	1200	3.9	20	ug/l	1050		115	85-115			
Lead, Total	49.7	0.083	0.20	ug/l	50.0		99	85-115			
Manganese, Dissolved	50.2	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	50.2	0.23	1.0	ug/l	50.0		100	85-115			
Nickel, Total	51.5	0.40	2.0	ug/l	50.0		103	85-115			
Potassium, Total	2.17	0.068	0.50	mg/l	2.05		106	85-115			
Selenium, Total	49.4	0.067	0.40	ug/l	50.0		99	85-115			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier	
Batch: W4B2090 - EPA 200.8 (Continued)												
LCS (W4B2090-BS1)												
					Prepared: 02/26/24		Analyzed: 02/29/24					
Silver, Total	50.1	0.027	0.20	ug/l	50.0		100	85-115				
Sodium, Total	2.20	0.10	1.0	mg/l	2.05		107	85-115				
Strontium, Total	49.4	0.036	0.20	ug/l	50.0		99	85-115				
Thallium, Total	49.3	0.021	0.20	ug/l	50.0		99	85-115				
Uranium, Total	48.1	0.02	0.20	ug/l	50.0		96	85-115				
Vanadium, Total	50.6	0.16	0.50	ug/l	50.0		101	85-115				
Zinc, Total	51.6	1.7	10	ug/l	50.0		103	85-115				
Matrix Spike (W4B2090-MS1)												
			Source: 4B16119-03			Prepared: 02/26/24		Analyzed: 02/29/24				
Aluminum, Total	46.8	4.4	20	ug/l	50.0	ND	93	70-130				
Antimony, Total	50.0	0.089	0.50	ug/l	50.0	ND	100	70-130				
Arsenic, Total	51.3	0.074	0.40	ug/l	50.0	0.272	102	70-130				
Barium, Total	59.6	0.14	1.0	ug/l	50.0	10.3	99	70-130				
Beryllium, Total	50.9	0.029	0.10	ug/l	50.0	ND	102	70-130				
Cadmium, Total	49.5	0.042	0.20	ug/l	50.0	ND	99	70-130				
Chromium, Total	49.6	0.089	0.20	ug/l	50.0	0.123	99	70-130				
Copper, Total	48.9	0.23	0.50	ug/l	50.0	ND	98	70-130				
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130				
Iron, Total	1140	3.9	20	ug/l	1050	ND	109	70-130				
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130				
Manganese, Dissolved	49.2	0.11	1.0	ug/l	50.0	ND	98	70-130				
Manganese, Total	49.2	0.23	1.0	ug/l	50.0	ND	98	70-130				
Nickel, Total	48.8	0.40	2.0	ug/l	50.0	ND	97	70-130				
Potassium, Total	2.83	0.068	0.50	mg/l	2.05	0.757	101	70-130				
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	0.422	99	70-130				
Silver, Total	49.5	0.027	0.20	ug/l	50.0	ND	99	70-130				
Sodium, Total	31.0	0.10	1.0	mg/l	2.05	31.0	0.6	70-130			MS-02	
Strontium, Total	187	0.036	0.20	ug/l	50.0	136	101	70-130				
Thallium, Total	50.2	0.021	0.20	ug/l	50.0	ND	100	70-130				
Uranium, Total	52.5	0.02	0.20	ug/l	50.0	2.37	100	70-130				
Vanadium, Total	50.6	0.16	0.50	ug/l	50.0	0.406	100	70-130				
Zinc, Total	49.9	1.7	10	ug/l	50.0	ND	100	70-130				
Matrix Spike (W4B2090-MS2)												
			Source: 4B20053-01			Prepared: 02/26/24		Analyzed: 02/29/24				
Aluminum, Total	46.9	4.4	20	ug/l	50.0	ND	94	70-130				
Antimony, Total	50.7	0.089	0.50	ug/l	50.0	0.271	101	70-130				
Arsenic, Total	51.7	0.074	0.40	ug/l	50.0	0.716	102	70-130				
Barium, Total	107	0.14	1.0	ug/l	50.0	55.2	103	70-130				
Beryllium, Total	49.1	0.029	0.10	ug/l	50.0	ND	98	70-130				
Cadmium, Total	49.5	0.042	0.20	ug/l	50.0	0.0425	99	70-130				
Chromium, Total	51.9	0.089	0.20	ug/l	50.0	2.50	99	70-130				

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike (W4B2090-MS2)			Source: 4B20053-01			Prepared: 02/26/24			Analyzed: 02/29/24		
Copper, Total	48.1	0.23	0.50	ug/l	50.0	ND	96	70-130			
Iron, Dissolved	1170	3.9	20	ug/l	1050	ND	111	70-130			
Iron, Total	1170	3.9	20	ug/l	1050	29.7	108	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	66.2	0.11	1.0	ug/l	50.0	18.1	96	70-130			
Manganese, Total	66.2	0.23	1.0	ug/l	50.0	18.6	95	70-130			
Nickel, Total	50.0	0.40	2.0	ug/l	50.0	2.23	96	70-130			
Potassium, Total	4.71	0.068	0.50	mg/l	2.05	2.72	97	70-130			
Selenium, Total	52.2	0.067	0.40	ug/l	50.0	3.78	97	70-130			
Silver, Total	48.8	0.027	0.20	ug/l	50.0	ND	98	70-130			
Sodium, Total	107	0.10	1.0	mg/l	2.05	109	NR	70-130			MS-02
Strontium, Total	645	0.036	0.20	ug/l	50.0	599	93	70-130			
Thallium, Total	50.2	0.021	0.20	ug/l	50.0	ND	100	70-130			
Uranium, Total	71.3	0.02	0.20	ug/l	50.0	19.9	103	70-130			
Vanadium, Total	55.4	0.16	0.50	ug/l	50.0	5.06	101	70-130			
Zinc, Total	48.5	1.7	10	ug/l	50.0	ND	97	70-130			
Matrix Spike Dup (W4B2090-MSD1)			Source: 4B16119-03			Prepared: 02/26/24			Analyzed: 02/29/24		
Aluminum, Total	46.6	4.4	20	ug/l	50.0	ND	93	70-130	0.3	30	
Antimony, Total	50.0	0.089	0.50	ug/l	50.0	ND	100	70-130	0.06	30	
Arsenic, Total	50.8	0.074	0.40	ug/l	50.0	0.272	101	70-130	1	30	
Barium, Total	60.0	0.14	1.0	ug/l	50.0	10.3	99	70-130	0.6	30	
Beryllium, Total	50.2	0.029	0.10	ug/l	50.0	ND	100	70-130	1	30	
Cadmium, Total	49.6	0.042	0.20	ug/l	50.0	ND	99	70-130	0.2	30	
Chromium, Total	50.5	0.089	0.20	ug/l	50.0	0.123	101	70-130	2	30	
Copper, Total	50.1	0.23	0.50	ug/l	50.0	ND	100	70-130	2	30	
Iron, Dissolved	1180	3.9	20	ug/l	1050	ND	113	70-130	4	30	
Iron, Total	1180	3.9	20	ug/l	1050	ND	113	70-130	4	30	
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101	70-130	0.2	30	
Manganese, Dissolved	50.1	0.11	1.0	ug/l	50.0	ND	100	70-130	2	30	
Manganese, Total	50.1	0.23	1.0	ug/l	50.0	ND	100	70-130	2	30	
Nickel, Total	49.6	0.40	2.0	ug/l	50.0	ND	99	70-130	2	30	
Potassium, Total	2.88	0.068	0.50	mg/l	2.05	0.757	103	70-130	2	30	
Selenium, Total	49.0	0.067	0.40	ug/l	50.0	0.422	97	70-130	2	30	
Silver, Total	49.4	0.027	0.20	ug/l	50.0	ND	99	70-130	0.3	30	
Sodium, Total	31.9	0.10	1.0	mg/l	2.05	31.0	48	70-130	3	30	MS-02
Strontium, Total	186	0.036	0.20	ug/l	50.0	136	99	70-130	0.5	30	
Thallium, Total	50.0	0.021	0.20	ug/l	50.0	ND	100	70-130	0.4	30	
Uranium, Total	52.2	0.02	0.20	ug/l	50.0	2.37	100	70-130	0.5	30	
Vanadium, Total	50.8	0.16	0.50	ug/l	50.0	0.406	101	70-130	0.3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B2090-MSD1) Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24											
Zinc, Total	49.3	1.7	10	ug/l	50.0	ND	98	70-130	1	30	
Matrix Spike Dup (W4B2090-MSD2) Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24											
Aluminum, Total	47.2	4.4	20	ug/l	50.0	ND	94	70-130	0.5	30	
Antimony, Total	50.2	0.089	0.50	ug/l	50.0	0.271	100	70-130	1	30	
Arsenic, Total	51.0	0.074	0.40	ug/l	50.0	0.716	100	70-130	1	30	
Barium, Total	106	0.14	1.0	ug/l	50.0	55.2	100	70-130	1	30	
Beryllium, Total	49.6	0.029	0.10	ug/l	50.0	ND	99	70-130	1	30	
Cadmium, Total	48.4	0.042	0.20	ug/l	50.0	0.0425	97	70-130	2	30	
Chromium, Total	52.1	0.089	0.20	ug/l	50.0	2.50	99	70-130	0.2	30	
Copper, Total	48.6	0.23	0.50	ug/l	50.0	ND	97	70-130	1	30	
Iron, Dissolved	1200	3.9	20	ug/l	1050	ND	114	70-130	3	30	
Iron, Total	1200	3.9	20	ug/l	1050	29.7	111	70-130	3	30	
Lead, Total	49.7	0.083	0.20	ug/l	50.0	ND	99	70-130	1	30	
Manganese, Dissolved	66.5	0.11	1.0	ug/l	50.0	18.1	97	70-130	0.5	30	
Manganese, Total	66.5	0.23	1.0	ug/l	50.0	18.6	96	70-130	0.5	30	
Nickel, Total	50.5	0.40	2.0	ug/l	50.0	2.23	96	70-130	0.8	30	
Potassium, Total	4.75	0.068	0.50	mg/l	2.05	2.72	99	70-130	0.8	30	
Selenium, Total	51.9	0.067	0.40	ug/l	50.0	3.78	96	70-130	0.7	30	
Silver, Total	48.5	0.027	0.20	ug/l	50.0	ND	97	70-130	0.7	30	
Sodium, Total	107	0.10	1.0	mg/l	2.05	109	NR	70-130	0.02	30	MS-02
Strontium, Total	639	0.036	0.20	ug/l	50.0	599	81	70-130	1	30	
Thallium, Total	49.6	0.021	0.20	ug/l	50.0	ND	99	70-130	1	30	
Uranium, Total	70.3	0.02	0.20	ug/l	50.0	19.9	101	70-130	1	30	
Vanadium, Total	55.7	0.16	0.50	ug/l	50.0	5.06	101	70-130	0.6	30	
Zinc, Total	48.3	1.7	10	ug/l	50.0	ND	97	70-130	0.2	30	

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1467 - SM 9221B											
Blank (W4B1467-BLK1) Prepared: 02/16/24 Analyzed: 02/18/24											
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica 97-005 - Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 04/29/2024 13:26

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Calculation is based on source temperature @20C
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B20046

Report Date: 3/13/2024

Received Date: 2/17/2024

Project: COSM 97-005 - COPCs

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

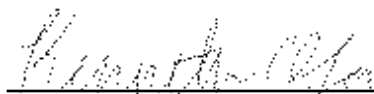
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/17/24 with the Chain-of-Custody document. The samples were received in good condition, at 14.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-6-S4	Brown & Caldwell	4B20046-01	Water	02/17/24 12:20	
AT-GS-6-S7	Brown & Caldwell	4B20046-02	Water	02/17/24 12:30	
AT-GS-6-S8	Brown & Caldwell	4B20046-03	Water	02/17/24 12:35	
AT-UV-6-S10	Brown & Caldwell	4B20046-04	Water	02/17/24 11:56	
AT-GAC-6-S11	Brown & Caldwell	4B20046-05	Water	02/17/24 12:40	
AT-GAC-6-S23	Brown & Caldwell	4B20046-06	Water	02/17/24 11:57	
AT-RO-6-S14	Brown & Caldwell	4B20046-07	Water	02/17/24 12:10	
AT-RO-6-S24	Brown & Caldwell	4B20046-08	Water	02/17/24 10:52	
AT-RO-6-S24D	Brown & Caldwell	4B20046-09	Water	02/17/24 10:55	
AT-DEC-6-S18	Brown & Caldwell	4B20046-10	Water	02/17/24 11:02	
AT-DEC-6-S19	Brown & Caldwell	4B20046-11	Water	02/17/24 11:43	
AT-RES-6-S22	Brown & Caldwell	4B20046-12	Water	02/17/24 11:19	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Freon 113	76-13-1			⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3	⊗		⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
THMs, Total				⊗
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:20 by Brown & Caldwell

4B20046-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1936		Preparation: EPA 5030B		Prepared: 02/23/24 07:55		Analyst: ADM	
1,2,3-Trichloropropane	0.046	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968		Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA	
11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	03/02/24	
ADONA	ND	0.49	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	0.78	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/02/24	
PFBS	1.6	0.51	1.8	ng/l	1	03/02/24	J
PFDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/02/24	
PFHpA	0.69	0.48	1.8	ng/l	1	03/02/24	J
PFHxA	2.4	0.44	1.8	ng/l	1	03/02/24	
PFHxS	1.5	0.53	1.8	ng/l	1	03/02/24	J
PFNA	ND	0.46	1.8	ng/l	1	03/02/24	
PFOA	0.71	0.60	1.8	ng/l	1	03/02/24	J
PFOS	ND	0.47	1.8	ng/l	1	03/02/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/02/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/02/24	

Surrogate(s)

13C2-PFDA	119%	Conc: 42.4	70-130	03/02/24
13C2-PFHxA	111%	Conc: 39.6	70-130	03/02/24
d5-EtFOSAA	105%	Conc: 150	70-130	03/02/24
HFPO-DA-13C3	102%	Conc: 36.5	70-130	03/02/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	0.69	0.27	0.50	ug/l	1	03/01/24	

4B20046

Page 3 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:20 by Brown & Caldwell

4B20046-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

1,1-Dichloroethene	3.4	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	0.77	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	4.5	0.27	0.50	ug/l	1	03/01/24	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:20 by Brown & Caldwell

4B20046-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	1.3	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	4.5		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	46	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	0.22	0.18	0.50	ug/l	1	03/01/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	82%	Conc: 40.8	70-130	03/01/24
4-Bromofluorobenzene	83%	Conc: 41.6	70-130	03/01/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:20 by Brown & Caldwell

4B20046-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:20 by Brown & Caldwell

4B20046-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1634

Preparation: EPA 522/SPE

Prepared: 02/21/24 07:47

Analyst: mld

1,4-Dioxane	64	0.56	1.4	ug/l	20	02/28/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	120%	Conc: 12.2	70-130			02/28/24	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:30 by Brown & Caldwell

4B20046-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	0.17	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	90%	Conc: 8.70	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1936	Preparation: EPA 5030B		Prepared: 02/23/24 07:55		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968	Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA		
11Cl-PF3OUdS	ND	0.48	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	03/02/24	
ADONA	ND	0.47	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/02/24	
PFBS	ND	0.50	1.7	ng/l	1	03/02/24	
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/02/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/02/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/02/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/02/24	
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	ND	0.57	1.7	ng/l	1	03/02/24	
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	121%	Conc: 41.6	70-130			03/02/24	
13C2-PFHxA	105%	Conc: 36.0	70-130			03/02/24	
d5-EtFOSAA	110%	Conc: 151	70-130			03/02/24	
HFPO-DA-13C3	97%	Conc: 33.4	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:30 by Brown & Caldwell

4B20046-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	1.5	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	0.49	0.24	0.50	ug/l	1	03/01/24	J
Bromoform	8.8	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	0.51	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:30 by Brown & Caldwell

4B20046-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	2.0	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	0.96	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	11		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	15	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:30 by Brown & Caldwell

4B20046-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.1	70-130			03/01/24	
4-Bromofluorobenzene	85%	Conc: 42.3	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S8

Sampled: 02/17/24 12:35 by Brown & Caldwell

4B20046-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1936		Preparation: EPA 5030B		Prepared: 02/23/24 07:55		Analyst: ADM	
1,2,3-Trichloropropane	0.045	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968		Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA	
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	03/02/24	
ADONA	ND	0.48	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/02/24	
PFBS	1.6	0.50	1.7	ng/l	1	03/02/24	J
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.57	1.7	ng/l	1	03/02/24	
PFHpA	0.66	0.46	1.7	ng/l	1	03/02/24	J
PFHxA	2.2	0.42	1.7	ng/l	1	03/02/24	
PFHxS	1.5	0.51	1.7	ng/l	1	03/02/24	J
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	0.67	0.58	1.7	ng/l	1	03/02/24	J
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	

Surrogate(s)

13C2-PFDA	121%	Conc: 41.7	70-130	03/02/24
13C2-PFHxA	105%	Conc: 36.4	70-130	03/02/24
d5-EtFOSAA	113%	Conc: 156	70-130	03/02/24
HFPO-DA-13C3	98%	Conc: 34.0	70-130	03/02/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	0.69	0.27	0.50	ug/l	1	03/01/24	

4B20046

Page 11 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S8

Sampled: 02/17/24 12:35 by Brown & Caldwell

4B20046-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

1,1-Dichloroethene	3.4	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	2.0	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	0.81	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	4.5	0.27	0.50	ug/l	1	03/01/24	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	0.78	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S8

Sampled: 02/17/24 12:35 by Brown & Caldwell

4B20046-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	1.5	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	7.3		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	47	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	03/01/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.3	70-130	03/01/24
4-Bromofluorobenzene	85%	Conc: 42.4	70-130	03/01/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S8

Sampled: 02/17/24 12:35 by Brown & Caldwell

4B20046-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-6-S8

Sampled: 02/17/24 12:35 by Brown & Caldwell

4B20046-03RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1634

Preparation: EPA 522/SPE

Prepared: 02/21/24 07:47

Analyst: mld

1,4-Dioxane	46	0.56	1.4	ug/l	20	02/28/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	88%	Conc: 8.82	70-130			02/28/24	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-6-S10

Sampled: 02/17/24 11:56 by Brown & Caldwell

4B20046-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	84%	Conc: 8.76	70-130			02/28/24	
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1936	Preparation: EPA 5030B		Prepared: 02/23/24 07:55		Analyst: ADM		
1,2,3-Trichloropropane	0.016	0.0012	0.0050	ug/l	1	02/24/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968	Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.8	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.46	1.8	ng/l	1	03/02/24	
ADONA	ND	0.48	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	0.76	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	0.50	1.8	ng/l	1	03/02/24	
PFBS	1.7	0.51	1.8	ng/l	1	03/02/24	J
PFDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFDoA	ND	0.57	1.8	ng/l	1	03/02/24	
PFHpA	0.65	0.47	1.8	ng/l	1	03/02/24	J
PFHxA	2.3	0.43	1.8	ng/l	1	03/02/24	
PFHxS	1.6	0.52	1.8	ng/l	1	03/02/24	J
PFNA	ND	0.46	1.8	ng/l	1	03/02/24	
PFOA	0.69	0.58	1.8	ng/l	1	03/02/24	J
PFOS	ND	0.47	1.8	ng/l	1	03/02/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/02/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	125%	Conc: 43.9	70-130			03/02/24	
13C2-PFHxA	112%	Conc: 39.2	70-130			03/02/24	
d5-EtFOSAA	112%	Conc: 157	70-130			03/02/24	
HFPO-DA-13C3	103%	Conc: 36.1	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-6-S10

Sampled: 02/17/24 11:56 by Brown & Caldwell

4B20046-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	0.37	0.27	0.50	ug/l	1	03/01/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	0.81	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	4.0	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-6-S10

Sampled: 02/17/24 11:56 by Brown & Caldwell

4B20046-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	4.0		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	03/01/24	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-6-S10

Sampled: 02/17/24 11:56 by Brown & Caldwell

4B20046-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.1	70-130			03/01/24	
4-Bromofluorobenzene	84%	Conc: 41.8	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-6-S11

Sampled: 02/17/24 12:40 by Brown & Caldwell

4B20046-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	0.59	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	96%	Conc: 10.1	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1936	Preparation: EPA 5030B		Prepared: 02/23/24 07:55		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968	Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA		
11CI-PF3OUdS	ND	0.44	1.6	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.42	1.6	ng/l	1	03/02/24	
ADONA	ND	0.44	1.6	ng/l	1	03/02/24	
EtFOSAA	ND	0.38	1.6	ng/l	1	03/02/24	
HFPO-DA	ND	0.69	1.6	ng/l	1	03/02/24	
MeFOSAA	ND	0.46	1.6	ng/l	1	03/02/24	
PFBS	ND	0.46	1.6	ng/l	1	03/02/24	
PFDA	ND	0.36	1.6	ng/l	1	03/02/24	
PFDoA	ND	0.52	1.6	ng/l	1	03/02/24	
PFHpA	ND	0.42	1.6	ng/l	1	03/02/24	
PFHxA	ND	0.39	1.6	ng/l	1	03/02/24	
PFHxS	ND	0.47	1.6	ng/l	1	03/02/24	
PFNA	ND	0.41	1.6	ng/l	1	03/02/24	
PFOA	ND	0.53	1.6	ng/l	1	03/02/24	
PFOS	ND	0.42	1.6	ng/l	1	03/02/24	
PFTeDA	ND	0.36	1.6	ng/l	1	03/02/24	
PFTTrDA	ND	0.33	1.6	ng/l	1	03/02/24	
PFUnA	ND	0.38	1.6	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	114%	Conc: 35.9	70-130			03/02/24	
13C2-PFHxA	108%	Conc: 34.1	70-130			03/02/24	
d5-EtFOSAA	99%	Conc: 125	70-130			03/02/24	
HFPO-DA-13C3	99%	Conc: 31.3	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-6-S11

Sampled: 02/17/24 12:40 by Brown & Caldwell

4B20046-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-6-S11

Sampled: 02/17/24 12:40 by Brown & Caldwell

4B20046-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	ND		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-6-S11

Sampled: 02/17/24 12:40 by Brown & Caldwell

4B20046-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	81%	Conc: 40.4	70-130			03/01/24	
4-Bromofluorobenzene	84%	Conc: 41.9	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-6-S23

Sampled: 02/17/24 11:57 by Brown & Caldwell

4B20046-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1634

Preparation: EPA 522/SPE

Prepared: 02/21/24 07:47

Analyst: mld

1,4-Dioxane 0.27 0.028 0.070 ug/l 1 02/28/24

Surrogate(s)

1,4-Dioxane-d8 94% Conc: 9.91 70-130 02/28/24

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W4B1936

Preparation: EPA 5030B

Prepared: 02/23/24 07:55

Analyst: ADM

1,2,3-Trichloropropane ND 0.0012 0.0050 ug/l 1 02/24/24

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W4B1968

Preparation: EPA 537/SPE

Prepared: 02/23/24 10:04

Analyst: JNA

11Cl-PF3OUdS ND 0.56 2.0 ng/l 1 03/02/24

9Cl-PF3ONS ND 0.53 2.0 ng/l 1 03/02/24

ADONA ND 0.55 2.0 ng/l 1 03/02/24

EtFOSAA ND 0.48 2.0 ng/l 1 03/02/24

HFPO-DA ND 0.87 2.0 ng/l 1 03/02/24

MeFOSAA ND 0.58 2.0 ng/l 1 03/02/24

PFBS ND 0.58 2.0 ng/l 1 03/02/24

PFDA ND 0.45 2.0 ng/l 1 03/02/24

PFDoA ND 0.66 2.0 ng/l 1 03/02/24

PFHpA ND 0.53 2.0 ng/l 1 03/02/24

PFHxA ND 0.49 2.0 ng/l 1 03/02/24

PFHxS ND 0.59 2.0 ng/l 1 03/02/24

PFNA ND 0.52 2.0 ng/l 1 03/02/24

PFOA ND 0.67 2.0 ng/l 1 03/02/24

PFOS ND 0.53 2.0 ng/l 1 03/02/24

PFTeDA ND 0.45 2.0 ng/l 1 03/02/24

PFTTrDA ND 0.42 2.0 ng/l 1 03/02/24

PFUnA ND 0.48 2.0 ng/l 1 03/02/24

Surrogate(s)

13C2-PFDA 122% Conc: 44.7 70-130 03/02/24

13C2-PFHxA 116% Conc: 42.7 70-130 03/02/24

d5-EtFOSAA 109% Conc: 160 70-130 03/02/24

HFPO-DA-13C3 106% Conc: 38.9 70-130 03/02/24

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-6-S23

Sampled: 02/17/24 11:57 by Brown & Caldwell

4B20046-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-6-S23

Sampled: 02/17/24 11:57 by Brown & Caldwell

4B20046-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	ND		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-6-S23

Sampled: 02/17/24 11:57 by Brown & Caldwell

4B20046-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 40.0	70-130			03/01/24	
4-Bromofluorobenzene	83%	Conc: 41.6	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S14

Sampled: 02/17/24 12:10 by Brown & Caldwell

4B20046-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	0.23	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	82%	Conc: 7.99	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1936	Preparation: EPA 5030B		Prepared: 02/23/24 07:55		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968	Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	03/02/24	
ADONA	ND	0.46	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	03/02/24	
PFBS	ND	0.49	1.7	ng/l	1	03/02/24	
PFDA	ND	0.38	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.55	1.7	ng/l	1	03/02/24	
PFHpA	ND	0.45	1.7	ng/l	1	03/02/24	
PFHxA	ND	0.41	1.7	ng/l	1	03/02/24	
PFHxS	ND	0.50	1.7	ng/l	1	03/02/24	
PFNA	ND	0.44	1.7	ng/l	1	03/02/24	
PFOA	ND	0.56	1.7	ng/l	1	03/02/24	
PFOS	ND	0.45	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	115%	Conc: 38.7	70-130			03/02/24	
13C2-PFHxA	97%	Conc: 32.8	70-130			03/02/24	
d5-EtFOSAA	107%	Conc: 145	70-130			03/02/24	
HFPO-DA-13C3	90%	Conc: 30.3	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S14

Sampled: 02/17/24 12:10 by Brown & Caldwell

4B20046-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	0.41	0.16	0.50	ug/l	1	03/01/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	0.30	0.24	0.50	ug/l	1	03/01/24	J
Bromoform	7.9	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S14

Sampled: 02/17/24 12:10 by Brown & Caldwell

4B20046-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	1.4	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	0.26	0.18	0.50	ug/l	1	03/01/24	J
THMs, Total	9.3		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	5.1	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-RO-6-S14

Sampled: 02/17/24 12:10 by Brown & Caldwell

4B20046-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 41.9	70-130			03/01/24	
4-Bromofluorobenzene	85%	Conc: 42.3	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S24

Sampled: 02/17/24 10:52 by Brown & Caldwell

4B20046-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1634	Preparation: EPA 522/SPE		Prepared: 02/21/24 07:47		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	79%	Conc: 8.20	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1936	Preparation: EPA 5030B		Prepared: 02/23/24 07:55		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968	Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.7	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.46	1.7	ng/l	1	03/02/24	
ADONA	ND	0.48	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/02/24	
PFBS	ND	0.50	1.7	ng/l	1	03/02/24	
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.57	1.7	ng/l	1	03/02/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/02/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/02/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/02/24	
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	ND	0.58	1.7	ng/l	1	03/02/24	
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	124%	Conc: 42.8	70-130			03/02/24	
13C2-PFHxA	117%	Conc: 40.6	70-130			03/02/24	
d5-EtFOSAA	105%	Conc: 146	70-130			03/02/24	
HFPO-DA-13C3	105%	Conc: 36.3	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S24

Sampled: 02/17/24 10:52 by Brown & Caldwell

4B20046-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	0.16	0.16	0.50	ug/l	1	03/01/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	10	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	5.3	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S24

Sampled: 02/17/24 10:52 by Brown & Caldwell

4B20046-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	0.97	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	6.3		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	2.2	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S24

Sampled: 02/17/24 10:52 by Brown & Caldwell

4B20046-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.1	70-130			03/01/24	
4-Bromofluorobenzene	85%	Conc: 42.3	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S24D

Sampled: 02/17/24 10:55 by Brown & Caldwell

4B20046-09 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W4B1944		Preparation: EPA 522/SPE			Prepared: 02/27/24 08:30		Analyst: mld
1,4-Dioxane	0.034	0.028	0.070	ug/l	1	02/28/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	97%	Conc: 9.81	70-130			02/28/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W4B1968		Preparation: EPA 537/SPE			Prepared: 02/23/24 10:04		Analyst: JNA
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	03/02/24	
ADONA	ND	0.47	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/02/24	
PFBS	ND	0.50	1.7	ng/l	1	03/02/24	
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDaA	ND	0.56	1.7	ng/l	1	03/02/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/02/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/02/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/02/24	
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	ND	0.57	1.7	ng/l	1	03/02/24	
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	123%	Conc: 42.3	70-130			03/02/24	
13C2-PFHxA	113%	Conc: 38.9	70-130			03/02/24	
d5-EtFOSAA	115%	Conc: 158	70-130			03/02/24	
HFPO-DA-13C3	103%	Conc: 35.6	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	

4B20046

Page 35 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S24D

Sampled: 02/17/24 10:55 by Brown & Caldwell

4B20046-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	0.17	0.16	0.50	ug/l	1	03/01/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	40	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	4.7	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S24D

Sampled: 02/17/24 10:55 by Brown & Caldwell

4B20046-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
Dibromochloromethane	0.88	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	5.6		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	2.2	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	

Surrogate(s)

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-6-S24D

Sampled: 02/17/24 10:55 by Brown & Caldwell

4B20046-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,2-Dichlorobenzene-d4	80%	Conc: 40.1	70-130			03/01/24	
4-Bromofluorobenzene	82%	Conc: 40.8	70-130			03/01/24	

Sample Results

(Continued)

Sample: AT-RO-6-S24D

Sampled: 02/17/24 10:55 by Brown & Caldwell

4B20046-09RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W4B2282		Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM	
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-6-S18

Sampled: 02/17/24 11:02 by Brown & Caldwell

4B20046-10 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.068	0.028	0.070	ug/l	1	02/28/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	96%	Conc: 9.25	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1937	Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968	Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA		
11Cl-PF3OUdS	ND	0.49	1.8	ng/l	1	03/02/24	
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	03/02/24	
ADONA	ND	0.49	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/02/24	
PFBS	ND	0.51	1.8	ng/l	1	03/02/24	
PFDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/02/24	
PFHpA	ND	0.47	1.8	ng/l	1	03/02/24	
PFHxA	ND	0.43	1.8	ng/l	1	03/02/24	
PFHxS	ND	0.52	1.8	ng/l	1	03/02/24	
PFNA	ND	0.46	1.8	ng/l	1	03/02/24	
PFOA	ND	0.59	1.8	ng/l	1	03/02/24	
PFOS	ND	0.47	1.8	ng/l	1	03/02/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/02/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	121%	Conc: 42.6	70-130			03/02/24	
13C2-PFHxA	114%	Conc: 40.0	70-130			03/02/24	
d5-EtFOSAA	106%	Conc: 149	70-130			03/02/24	
HFPO-DA-13C3	106%	Conc: 37.5	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-6-S18

Sampled: 02/17/24 11:02 by Brown & Caldwell

4B20046-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	0.18	0.16	0.50	ug/l	1	03/01/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	5.4	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-6-S18

Sampled: 02/17/24 11:02 by Brown & Caldwell

4B20046-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	1.0	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	6.4		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	2.7	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-6-S18

Sampled: 02/17/24 11:02 by Brown & Caldwell

4B20046-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 40.2	70-130			03/01/24	
4-Bromofluorobenzene	83%	Conc: 41.5	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-6-S19

Sampled: 02/17/24 11:43 by Brown & Caldwell

4B20046-11 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1944

Preparation: EPA 522/SPE

Prepared: 02/27/24 08:30

Analyst: mld

1,4-Dioxane **0.092** 0.028 0.070 ug/l 1 02/28/24

Surrogate(s)

1,4-Dioxane-d8 104% Conc: 10.2 70-130 02/28/24

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W4B1937

Preparation: EPA 5030B

Prepared: 02/23/24 07:56

Analyst: ADM

1,2,3-Trichloropropane ND 0.0012 0.0050 ug/l 1 02/24/24

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W4B1968

Preparation: EPA 537/SPE

Prepared: 02/23/24 10:04

Analyst: JNA

11Cl-PF3OUdS ND 0.51 1.8 ng/l 1 03/02/24

9Cl-PF3ONS ND 0.48 1.8 ng/l 1 03/02/24

ADONA ND 0.50 1.8 ng/l 1 03/02/24

EtFOSAA ND 0.43 1.8 ng/l 1 03/02/24

HFPO-DA ND 0.79 1.8 ng/l 1 03/02/24

MeFOSAA ND 0.52 1.8 ng/l 1 03/02/24

PFBS ND 0.52 1.8 ng/l 1 03/02/24

PFDA ND 0.41 1.8 ng/l 1 03/02/24

PFDoA ND 0.59 1.8 ng/l 1 03/02/24

PFHpA ND 0.48 1.8 ng/l 1 03/02/24

PFHxA ND 0.44 1.8 ng/l 1 03/02/24

PFHxS ND 0.54 1.8 ng/l 1 03/02/24

PFNA ND 0.47 1.8 ng/l 1 03/02/24

PFOA ND 0.60 1.8 ng/l 1 03/02/24

PFOS ND 0.48 1.8 ng/l 1 03/02/24

PFTeDA ND 0.41 1.8 ng/l 1 03/02/24

PFTTrDA ND 0.38 1.8 ng/l 1 03/02/24

PFUnA ND 0.43 1.8 ng/l 1 03/02/24

Surrogate(s)

13C2-PFDA 123% Conc: 44.4 70-130 03/02/24

13C2-PFHxA 114% Conc: 41.4 70-130 03/02/24

d5-EtFOSAA 111% Conc: 160 70-130 03/02/24

HFPO-DA-13C3 106% Conc: 38.5 70-130 03/02/24

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-6-S19

Sampled: 02/17/24 11:43 by Brown & Caldwell

4B20046-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	3.6	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-6-S19

Sampled: 02/17/24 11:43 by Brown & Caldwell

4B20046-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	0.48	0.20	0.50	ug/l	1	03/01/24	J
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	3.6		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	0.21	0.18	0.50	ug/l	1	03/01/24	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-6-S19

Sampled: 02/17/24 11:43 by Brown & Caldwell

4B20046-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.3	70-130			03/01/24	
4-Bromofluorobenzene	85%	Conc: 42.3	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:19 by Brown & Caldwell

4B20046-12 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.083	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	103%	Conc: 10.3	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1937	Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968	Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA		
11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	03/02/24	
ADONA	ND	0.49	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/02/24	
PFBS	ND	0.51	1.8	ng/l	1	03/02/24	
PFDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/02/24	
PFHpA	ND	0.47	1.8	ng/l	1	03/02/24	
PFHxA	ND	0.43	1.8	ng/l	1	03/02/24	
PFHxS	ND	0.52	1.8	ng/l	1	03/02/24	
PFNA	ND	0.46	1.8	ng/l	1	03/02/24	
PFOA	ND	0.59	1.8	ng/l	1	03/02/24	
PFOS	ND	0.47	1.8	ng/l	1	03/02/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/02/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	115%	Conc: 40.6	70-130			03/02/24	
13C2-PFHxA	87%	Conc: 30.8	70-130			03/02/24	
d5-EtFOSAA	105%	Conc: 148	70-130			03/02/24	
HFPO-DA-13C3	79%	Conc: 28.0	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:19 by Brown & Caldwell

4B20046-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	3.4	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:19 by Brown & Caldwell

4B20046-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	0.46	0.20	0.50	ug/l	1	03/01/24	J
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	3.4		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	0.21	0.18	0.50	ug/l	1	03/01/24	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:19 by Brown & Caldwell

4B20046-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B			Prepared: 02/29/24 07:20		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.7	70-130			03/01/24	
4-Bromofluorobenzene	84%	Conc: 41.9	70-130			03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1634 - EPA 522											
Blank (W4B1634-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.67			ug/l	10.0		87	70-130			
LCS (W4B1634-BS1)											
1,4-Dioxane	0.348	0.028	0.070	ug/l	0.400		87	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.37			ug/l	10.0		94	70-130			
LCS Dup (W4B1634-BSD1)											
1,4-Dioxane	0.373	0.028	0.070	ug/l	0.400		93	70-130	7	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.78			ug/l	10.0		98	70-130			
Batch: W4B1944 - EPA 522											
Blank (W4B1944-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.21			ug/l	10.0		92	70-130			
LCS (W4B1944-BS1)											
1,4-Dioxane	0.0515	0.028	0.070	ug/l	0.0600		86	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.39			ug/l	10.0		94	70-130			
LCS Dup (W4B1944-BSD1)											
1,4-Dioxane	0.0600	0.028	0.070	ug/l	0.0600		100	50-150	15	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.73			ug/l	10.0		97	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1936 - SRL 524M-TCP											
Blank (W4B1936-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared: 02/23/24 Analyzed: 02/24/24						
LCS (W4B1936-BS1)											
1,2,3-Trichloropropane	0.0200	0.0012	0.0050	ug/l	0.0200		100	80-120			
					Prepared: 02/23/24 Analyzed: 02/24/24						
LCS Dup (W4B1936-BSD1)											
1,2,3-Trichloropropane	0.0236	0.0012	0.0050	ug/l	0.0200		118	80-120	17	20	
					Prepared: 02/23/24 Analyzed: 02/24/24						
Duplicate (W4B1936-DUP1)											
		Source: 4B16033-11			Prepared: 02/23/24 Analyzed: 02/24/24						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
Batch: W4B1937 - SRL 524M-TCP											
Blank (W4B1937-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared: 02/23/24 Analyzed: 02/24/24						
LCS (W4B1937-BS1)											
1,2,3-Trichloropropane	0.0196	0.0012	0.0050	ug/l	0.0200		98	80-120			
					Prepared: 02/23/24 Analyzed: 02/24/24						
LCS Dup (W4B1937-BSD1)											
1,2,3-Trichloropropane	0.0216	0.0012	0.0050	ug/l	0.0200		108	80-120	10	20	
					Prepared: 02/23/24 Analyzed: 02/24/24						
Duplicate (W4B1937-DUP1)											
		Source: 4B20046-10			Prepared: 02/23/24 Analyzed: 02/24/24						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
Batch: W4B2282 - SRL 524M-TCP											
Blank (W4B2282-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared & Analyzed: 02/28/24						
LCS (W4B2282-BS1)											
1,2,3-Trichloropropane	0.0188	0.0012	0.0050	ug/l	0.0200		94	80-120			
					Prepared & Analyzed: 02/28/24						
LCS Dup (W4B2282-BSD1)											
1,2,3-Trichloropropane	0.0210	0.0012	0.0050	ug/l	0.0200		105	80-120	11	20	
					Prepared & Analyzed: 02/28/24						
Duplicate (W4B2282-DUP1)											
		Source: 4B20056-04			Prepared & Analyzed: 02/28/24						
1,2,3-Trichloropropane	0.0171	0.0012	0.0050	ug/l		0.0164			4	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1968 - EPA 537.1									
Blank (W4B1968-BLK1)					Prepared: 02/23/24 Analyzed: 03/02/24				
11CI-PF3OUdS	ND	0.56	2.0	ng/l					
9CI-PF3ONS	ND	0.53	2.0	ng/l					
ADONA	ND	0.55	2.0	ng/l					
EtFOSAA	ND	0.48	2.0	ng/l					
HFPO-DA	ND	0.87	2.0	ng/l					
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	49.4			ng/l	40.0		124 70-130		
13C2-PFHxA	46.2			ng/l	40.0		116 70-130		
d5-EtFOSAA	180			ng/l	160		112 70-130		
HFPO-DA-13C3	41.5			ng/l	40.0		104 70-130		
LCS (W4B1968-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24				
11CI-PF3OUdS	17.4	0.56	2.0	ng/l	20.0		87 70-130		
9CI-PF3ONS	17.3	0.53	2.0	ng/l	20.0		87 70-130		
ADONA	19.2	0.55	2.0	ng/l	20.0		96 70-130		
EtFOSAA	18.6	0.48	2.0	ng/l	20.0		93 70-130		
HFPO-DA	18.5	0.87	2.0	ng/l	20.0		93 70-130		
MeFOSAA	18.9	0.58	2.0	ng/l	20.0		95 70-130		
PFBS	19.7	0.58	2.0	ng/l	20.0		98 70-130		
PFDA	18.4	0.45	2.0	ng/l	20.0		92 70-130		
PFDoA	18.7	0.66	2.0	ng/l	20.0		94 70-130		
PFHpA	19.9	0.53	2.0	ng/l	20.0		100 70-130		
PFHxA	19.5	0.49	2.0	ng/l	20.0		97 70-130		
PFHxS	19.3	0.59	2.0	ng/l	20.0		97 70-130		
PFNA	19.5	0.52	2.0	ng/l	20.0		98 70-130		
PFOA	20.0	0.67	2.0	ng/l	20.0		100 70-130		
PFOS	18.6	0.53	2.0	ng/l	20.0		93 70-130		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1968 - EPA 537.1 (Continued)										
LCS (W4B1968-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24					
PFTeDA	18.0	0.45	2.0	ng/l	20.0		90 70-130			
PFTTrDA	18.2	0.42	2.0	ng/l	20.0		91 70-130			
PFUnA	18.9	0.48	2.0	ng/l	20.0		94 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	48.5			ng/l	40.0		121 70-130			
13C2-PFHxA	46.0			ng/l	40.0		115 70-130			
d5-EtFOSAA	180			ng/l	160		112 70-130			
HFPO-DA-13C3	43.7			ng/l	40.0		109 70-130			
LCS Dup (W4B1968-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24					
11Cl-PF3OUdS	17.8	0.56	2.0	ng/l	20.0		89 70-130	2	30	
9Cl-PF3ONS	18.0	0.53	2.0	ng/l	20.0		90 70-130	4	30	
ADONA	19.9	0.55	2.0	ng/l	20.0		99 70-130	3	30	
EtFOSAA	18.2	0.48	2.0	ng/l	20.0		91 70-130	3	30	
HFPO-DA	18.7	0.87	2.0	ng/l	20.0		93 70-130	0.9	30	
MeFOSAA	18.9	0.58	2.0	ng/l	20.0		94 70-130	0.3	30	
PFBS	19.7	0.58	2.0	ng/l	20.0		99 70-130	0.3	30	
PFDA	18.3	0.45	2.0	ng/l	20.0		91 70-130	0.9	30	
PFDoA	19.3	0.66	2.0	ng/l	20.0		96 70-130	3	30	
PFHpA	20.4	0.53	2.0	ng/l	20.0		102 70-130	2	30	
PFHxA	19.9	0.49	2.0	ng/l	20.0		100 70-130	2	30	
PFHxS	19.7	0.59	2.0	ng/l	20.0		98 70-130	2	30	
PFNA	20.2	0.52	2.0	ng/l	20.0		101 70-130	4	30	
PFOA	20.2	0.67	2.0	ng/l	20.0		101 70-130	0.8	30	
PFOS	19.1	0.53	2.0	ng/l	20.0		95 70-130	2	30	
PFTeDA	17.6	0.45	2.0	ng/l	20.0		88 70-130	2	30	
PFTTrDA	18.2	0.42	2.0	ng/l	20.0		91 70-130	0.07	30	
PFUnA	19.3	0.48	2.0	ng/l	20.0		97 70-130	2	30	
<i>Surrogate(s)</i>										
13C2-PFDA	48.5			ng/l	40.0		121 70-130			
13C2-PFHxA	47.6			ng/l	40.0		119 70-130			
d5-EtFOSAA	175			ng/l	160		110 70-130			
HFPO-DA-13C3	45.2			ng/l	40.0		113 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD		Qualifier
									RPD	Limit	
Batch: W4B2411 - EPA 524.2											
Blank (W4B2411-BLK1)						Prepared: 02/29/24 Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)											
Blank (W4B2411-BLK1)						Prepared: 02/29/24 Analyzed: 03/01/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	39.7			ug/l	50.0		79	70-130			
4-Bromofluorobenzene	41.6			ug/l	50.0		83	70-130			
LCS (W4B2411-BS1)						Prepared: 02/29/24 Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	5.01	0.24	0.50	ug/l	5.00		100	70-130			
1,1,1-Trichloroethane	4.79	0.26	0.50	ug/l	5.00		96	70-130			
1,1,2,2-Tetrachloroethane	4.43	0.20	0.50	ug/l	5.00		89	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)											
LCS (W4B2411-BS1)				Prepared: 02/29/24 Analyzed: 03/01/24							
1,1,2-Trichloroethane	4.72	0.19	0.50	ug/l	5.00		94	70-130			
1,1-Dichloroethane	4.44	0.27	0.50	ug/l	5.00		89	70-130			
1,1-Dichloroethene	4.33	0.16	0.50	ug/l	5.00		87	70-130			
1,1-Dichloropropene	4.34	0.14	0.50	ug/l	5.00		87	70-130			
1,2,3-Trichlorobenzene	5.24	0.40	0.50	ug/l	5.00		105	70-130			
1,2,3-Trichloropropane	4.77	0.22	0.50	ug/l	5.00		95	70-130			
1,2,4-Trichlorobenzene	5.73	0.17	0.50	ug/l	5.00		115	70-130			
1,2,4-Trimethylbenzene	4.63	0.20	0.50	ug/l	5.00		93	70-130			
1,2-Dichloroethane	4.51	0.24	0.50	ug/l	5.00		90	70-130			
1,2-Dichloropropane	4.33	0.13	0.50	ug/l	5.00		87	70-130			
1,3,5-Trimethylbenzene	4.53	0.17	0.50	ug/l	5.00		91	70-130			
1,3-Dichloropropane	4.75	0.27	0.50	ug/l	5.00		95	70-130			
2,2-Dichloropropane	4.80	0.17	0.50	ug/l	5.00		96	70-130			
2-Butanone	3.98	1.5	5.0	ug/l	5.00		80	70-130			J
2-Chlorotoluene	5.04	0.15	0.50	ug/l	5.00		101	70-130			
2-Hexanone	4.54	1.2	5.0	ug/l	5.00		91	70-130			J
4-Chlorotoluene	4.91	0.15	0.50	ug/l	5.00		98	70-130			
4-Methyl-2-pentanone	4.46	1.8	5.0	ug/l	5.00		89	70-130			J
Acetone	43.1	3.1	5.0	ug/l	50.0		86	70-130			
Benzene	4.58	0.15	0.50	ug/l	5.00		92	70-130			
Bromobenzene	5.13	0.15	0.50	ug/l	5.00		103	70-130			
Bromochloromethane	4.16	0.15	0.50	ug/l	5.00		83	70-130			
Bromodichloromethane	4.55	0.24	0.50	ug/l	5.00		91	70-130			
Bromoform	5.37	0.38	0.50	ug/l	5.00		107	70-130			
Bromomethane	4.69	0.27	0.50	ug/l	5.00		94	70-130			
Carbon Disulfide	4.56	0.25	0.50	ug/l	5.00		91	70-130			
Carbon tetrachloride	4.96	0.27	0.50	ug/l	5.00		99	70-130			
Chlorobenzene	5.74	0.15	0.50	ug/l	5.00		115	70-130			
Chloroethane	4.41	0.17	0.50	ug/l	5.00		88	70-130			
Chloroform	4.59	0.27	0.50	ug/l	5.00		92	70-130			
Chloromethane	3.81	0.23	0.50	ug/l	5.00		76	70-130			
cis-1,2-Dichloroethene	4.35	0.25	0.50	ug/l	5.00		87	70-130			
cis-1,3-Dichloropropene	4.83	0.30	0.50	ug/l	5.00		97	70-130			
Dibromochloromethane	5.11	0.20	0.50	ug/l	5.00		102	70-130			
Dibromomethane	4.65	0.20	0.50	ug/l	5.00		93	70-130			
Dichlorodifluoromethane (Freon 12)	4.53	0.45	0.50	ug/l	5.00		91	70-130			
Di-isopropyl ether	16.5	1.1	2.0	ug/l	20.0		83	70-130			
Ethyl tert-butyl ether	18.7	1.0	2.0	ug/l	20.0		93	70-130			
Ethylbenzene	4.70	0.21	0.50	ug/l	5.00		94	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)										
LCS (W4B2411-BS1)					Prepared: 02/29/24 Analyzed: 03/01/24					
Freon 113	4.74	1.5	5.0	ug/l	5.00	95	70-130			J
Hexachlorobutadiene	5.50	0.40	0.50	ug/l	5.00	110	70-130			
Isopropylbenzene	4.66	0.18	0.50	ug/l	5.00	93	70-130			
m,p-Xylene	4.58	0.33	0.50	ug/l	5.00	92	70-130			
m-Dichlorobenzene	5.01	0.14	0.50	ug/l	5.00	100	70-130			
Methyl tert-butyl ether (MTBE)	18.9	0.94	2.0	ug/l	20.0	94	70-130			
Methylene chloride	4.00	0.30	0.50	ug/l	5.00	80	70-130			
Naphthalene	4.89	0.35	0.50	ug/l	5.00	98	70-130			
n-Butylbenzene	4.79	0.29	0.50	ug/l	5.00	96	70-130			
n-Propylbenzene	4.39	0.18	0.50	ug/l	5.00	88	70-130			
o-Dichlorobenzene	4.93	0.19	0.50	ug/l	5.00	99	70-130			
o-Xylene	4.86	0.20	0.50	ug/l	5.00	97	70-130			
p-Dichlorobenzene	5.16	0.18	0.50	ug/l	5.00	103	70-130			
p-Isopropyltoluene	4.66	0.25	0.50	ug/l	5.00	93	70-130			
sec-Butylbenzene	4.53	0.24	0.50	ug/l	5.00	91	70-130			
Styrene	4.81	0.19	0.50	ug/l	5.00	96	70-130			
Tert-amyl methyl ether	19.2	0.59	2.0	ug/l	20.0	96	70-130			
tert-Butylbenzene	4.68	0.18	0.50	ug/l	5.00	94	70-130			
Tetrachloroethene	5.55	0.18	0.50	ug/l	5.00	111	70-130			
Toluene	4.71	0.29	0.50	ug/l	5.00	94	70-130			
trans-1,2-Dichloroethene	4.33	0.26	0.50	ug/l	5.00	87	70-130			
trans-1,3-Dichloropropene	5.19	0.32	0.50	ug/l	5.00	104	70-130			
Trichloroethene	4.83	0.18	0.50	ug/l	5.00	97	70-130			
Trichlorofluoromethane	4.92	0.18	0.50	ug/l	5.00	98	70-130			
Vinyl chloride	4.28	0.18	0.50	ug/l	5.00	86	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0	90	70-130			
4-Bromofluorobenzene	45.3			ug/l	50.0	91	70-130			
LCS Dup (W4B2411-BS1)					Prepared: 02/29/24 Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	4.87	0.24	0.50	ug/l	5.00	97	70-130	3	30	
1,1,1-Trichloroethane	4.53	0.26	0.50	ug/l	5.00	91	70-130	6	30	
1,1,2,2-Tetrachloroethane	4.42	0.20	0.50	ug/l	5.00	88	70-130	0.4	30	
1,1,2-Trichloroethane	4.54	0.19	0.50	ug/l	5.00	91	70-130	4	30	
1,1-Dichloroethane	4.32	0.27	0.50	ug/l	5.00	86	70-130	3	30	
1,1-Dichloroethene	4.17	0.16	0.50	ug/l	5.00	83	70-130	4	30	
1,1-Dichloropropene	4.12	0.14	0.50	ug/l	5.00	82	70-130	5	30	
1,2,3-Trichlorobenzene	5.01	0.40	0.50	ug/l	5.00	100	70-130	5	30	
1,2,3-Trichloropropane	4.67	0.22	0.50	ug/l	5.00	93	70-130	2	30	
1,2,4-Trichlorobenzene	5.08	0.17	0.50	ug/l	5.00	102	70-130	12	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)											
LCS Dup (W4B2411-BSD1)											
					Prepared: 02/29/24 Analyzed: 03/01/24						
1,2,4-Trimethylbenzene	4.48	0.20	0.50	ug/l	5.00	90	70-130	3	30		
1,2-Dichloroethane	4.47	0.24	0.50	ug/l	5.00	89	70-130	0.9	30		
1,2-Dichloropropane	4.24	0.13	0.50	ug/l	5.00	85	70-130	2	30		
1,3,5-Trimethylbenzene	4.39	0.17	0.50	ug/l	5.00	88	70-130	3	30		
1,3-Dichloropropane	4.58	0.27	0.50	ug/l	5.00	92	70-130	4	30		
2,2-Dichloropropane	4.71	0.17	0.50	ug/l	5.00	94	70-130	2	30		
2-Butanone	4.01	1.5	5.0	ug/l	5.00	80	70-130	0.8	30		J
2-Chlorotoluene	4.84	0.15	0.50	ug/l	5.00	97	70-130	4	30		
2-Hexanone	4.52	1.2	5.0	ug/l	5.00	90	70-130	0.4	30		J
4-Chlorotoluene	4.80	0.15	0.50	ug/l	5.00	96	70-130	2	30		
4-Methyl-2-pentanone	4.62	1.8	5.0	ug/l	5.00	92	70-130	4	30		J
Acetone	44.3	3.1	5.0	ug/l	50.0	89	70-130	3	30		
Benzene	4.43	0.15	0.50	ug/l	5.00	89	70-130	3	30		
Bromobenzene	5.04	0.15	0.50	ug/l	5.00	101	70-130	2	30		
Bromochloromethane	4.18	0.15	0.50	ug/l	5.00	84	70-130	0.5	30		
Bromodichloromethane	4.41	0.24	0.50	ug/l	5.00	88	70-130	3	30		
Bromoform	5.31	0.38	0.50	ug/l	5.00	106	70-130	1	30		
Bromomethane	4.55	0.27	0.50	ug/l	5.00	91	70-130	3	30		
Carbon Disulfide	4.30	0.25	0.50	ug/l	5.00	86	70-130	6	30		
Carbon tetrachloride	4.69	0.27	0.50	ug/l	5.00	94	70-130	6	30		
Chlorobenzene	5.09	0.15	0.50	ug/l	5.00	102	70-130	12	30		
Chloroethane	4.19	0.17	0.50	ug/l	5.00	84	70-130	5	30		
Chloroform	4.42	0.27	0.50	ug/l	5.00	88	70-130	4	30		
Chloromethane	3.77	0.23	0.50	ug/l	5.00	75	70-130	1	30		
cis-1,2-Dichloroethene	4.22	0.25	0.50	ug/l	5.00	84	70-130	3	30		
cis-1,3-Dichloropropene	4.71	0.30	0.50	ug/l	5.00	94	70-130	2	30		
Dibromochloromethane	4.88	0.20	0.50	ug/l	5.00	98	70-130	4	30		
Dibromomethane	4.54	0.20	0.50	ug/l	5.00	91	70-130	2	30		
Dichlorodifluoromethane (Freon 12)	3.88	0.45	0.50	ug/l	5.00	78	70-130	15	30		
Di-isopropyl ether	16.6	1.1	2.0	ug/l	20.0	83	70-130	0.1	30		
Ethyl tert-butyl ether	18.7	1.0	2.0	ug/l	20.0	93	70-130	0.07	30		
Ethylbenzene	4.39	0.21	0.50	ug/l	5.00	88	70-130	7	30		
Freon 113	4.23	1.5	5.0	ug/l	5.00	85	70-130	11	30		J
Hexachlorobutadiene	5.08	0.40	0.50	ug/l	5.00	102	70-130	8	30		
Isopropylbenzene	4.37	0.18	0.50	ug/l	5.00	87	70-130	7	30		
m,p-Xylene	4.37	0.33	0.50	ug/l	5.00	87	70-130	5	30		
m-Dichlorobenzene	4.82	0.14	0.50	ug/l	5.00	96	70-130	4	30		
Methyl tert-butyl ether (MTBE)	18.9	0.94	2.0	ug/l	20.0	95	70-130	0.3	30		
Methylene chloride	4.00	0.30	0.50	ug/l	5.00	80	70-130	0.03	30		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)										
LCS Dup (W4B2411-BSD1)					Prepared: 02/29/24 Analyzed: 03/01/24					
Naphthalene	4.55	0.35	0.50	ug/l	5.00	91	70-130	7	30	
n-Butylbenzene	4.36	0.29	0.50	ug/l	5.00	87	70-130	9	30	
n-Propylbenzene	3.96	0.18	0.50	ug/l	5.00	79	70-130	10	30	
o-Dichlorobenzene	4.82	0.19	0.50	ug/l	5.00	96	70-130	2	30	
o-Xylene	4.52	0.20	0.50	ug/l	5.00	90	70-130	7	30	
p-Dichlorobenzene	5.08	0.18	0.50	ug/l	5.00	102	70-130	2	30	
p-Isopropyltoluene	4.44	0.25	0.50	ug/l	5.00	89	70-130	5	30	
sec-Butylbenzene	4.31	0.24	0.50	ug/l	5.00	86	70-130	5	30	
Styrene	4.66	0.19	0.50	ug/l	5.00	93	70-130	3	30	
Tert-amyl methyl ether	19.3	0.59	2.0	ug/l	20.0	96	70-130	0.1	30	
tert-Butylbenzene	4.43	0.18	0.50	ug/l	5.00	89	70-130	6	30	
Tetrachloroethene	5.03	0.18	0.50	ug/l	5.00	101	70-130	10	30	
Toluene	4.56	0.29	0.50	ug/l	5.00	91	70-130	3	30	
trans-1,2-Dichloroethene	4.22	0.26	0.50	ug/l	5.00	84	70-130	3	30	
trans-1,3-Dichloropropene	4.98	0.32	0.50	ug/l	5.00	100	70-130	4	30	
Trichloroethene	4.68	0.18	0.50	ug/l	5.00	94	70-130	3	30	
Trichlorofluoromethane	4.53	0.18	0.50	ug/l	5.00	91	70-130	8	30	
Vinyl chloride	4.02	0.18	0.50	ug/l	5.00	80	70-130	6	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	45.2			ug/l	50.0	90	70-130			
4-Bromofluorobenzene	45.2			ug/l	50.0	90	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/13/2024 10:48

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20048

Report Date: 4/29/2024

Received Date: 2/17/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

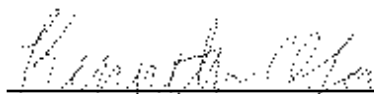
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/17/24 with the Chain-of-Custody document. The samples were received in good condition, at 14.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/29/2024 10:48

Project Manager: Brown & Caldwell

Case Narrative

This is a Supplement to the Certificate of Analysis previously issued 4/4/2024 for the above referenced Project to report additional metals requested by Steven Shiokari.

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-6-S22	Brown & Caldwell	4B20048-03	Water	02/17/24 11:27	

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 200.8 in Water Uranium, Total	7440-61-1			⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/29/2024 10:48

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:27 by Brown & Caldwell

4B20048-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.8							
Batch ID: W4B2090	Preparation: EPA 200.2						
							Instr: ICPMS06
							Prepared: 02/26/24 13:50
							Analyst: tyc
Antimony, Total	ND	0.089	0.50	ug/l	1	02/29/24	
Beryllium, Total	ND	0.029	0.10	ug/l	1	02/29/24	
Cadmium, Total	ND	0.042	0.20	ug/l	1	02/29/24	
Chromium, Total	0.16	0.089	0.20	ug/l	1	02/29/24	J
Nickel, Total	ND	0.40	2.0	ug/l	1	02/29/24	
Silver, Total	ND	0.027	0.20	ug/l	1	02/29/24	
Thallium, Total	ND	0.021	0.20	ug/l	1	02/29/24	
Uranium, Total	2.1	0.02	0.20	ug/l	1	02/29/24	
Vanadium, Total	0.28	0.16	0.50	ug/l	1	02/29/24	J
Zinc, Total	ND	1.7	10	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/29/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2090 - EPA 200.8											
Blank (W4B2090-BLK1)						Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	ND	0.089	0.50	ug/l							
Beryllium, Total	ND	0.029	0.10	ug/l							
Cadmium, Total	ND	0.042	0.20	ug/l							
Chromium, Total	ND	0.089	0.20	ug/l							
Nickel, Total	ND	0.40	2.0	ug/l							
Silver, Total	ND	0.027	0.20	ug/l							
Thallium, Total	ND	0.021	0.20	ug/l							
Uranium, Total	ND	0.02	0.20	ug/l							
Vanadium, Total	ND	0.16	0.50	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W4B2090-BS1)						Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	48.8	0.089	0.50	ug/l	50.0		98	85-115			
Beryllium, Total	49.7	0.029	0.10	ug/l	50.0		99	85-115			
Cadmium, Total	49.8	0.042	0.20	ug/l	50.0		100	85-115			
Chromium, Total	50.7	0.089	0.20	ug/l	50.0		101	85-115			
Nickel, Total	51.5	0.40	2.0	ug/l	50.0		103	85-115			
Silver, Total	50.1	0.027	0.20	ug/l	50.0		100	85-115			
Thallium, Total	49.3	0.021	0.20	ug/l	50.0		99	85-115			
Uranium, Total	48.1	0.02	0.20	ug/l	50.0		96	85-115			
Vanadium, Total	50.6	0.16	0.50	ug/l	50.0		101	85-115			
Zinc, Total	51.6	1.7	10	ug/l	50.0		103	85-115			
Matrix Spike (W4B2090-MS1)						Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	50.0	0.089	0.50	ug/l	50.0	ND	100	70-130			
Beryllium, Total	50.9	0.029	0.10	ug/l	50.0	ND	102	70-130			
Cadmium, Total	49.5	0.042	0.20	ug/l	50.0	ND	99	70-130			
Chromium, Total	49.6	0.089	0.20	ug/l	50.0	0.123	99	70-130			
Nickel, Total	48.8	0.40	2.0	ug/l	50.0	ND	97	70-130			
Silver, Total	49.5	0.027	0.20	ug/l	50.0	ND	99	70-130			
Thallium, Total	50.2	0.021	0.20	ug/l	50.0	ND	100	70-130			
Uranium, Total	52.5	0.02	0.20	ug/l	50.0	2.37	100	70-130			
Vanadium, Total	50.6	0.16	0.50	ug/l	50.0	0.406	100	70-130			
Zinc, Total	49.9	1.7	10	ug/l	50.0	ND	100	70-130			
Matrix Spike (W4B2090-MS2)						Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	50.7	0.089	0.50	ug/l	50.0	0.271	101	70-130			
Beryllium, Total	49.1	0.029	0.10	ug/l	50.0	ND	98	70-130			
Cadmium, Total	49.5	0.042	0.20	ug/l	50.0	0.0425	99	70-130			
Chromium, Total	51.9	0.089	0.20	ug/l	50.0	2.50	99	70-130			
Nickel, Total	50.0	0.40	2.0	ug/l	50.0	2.23	96	70-130			
Silver, Total	48.8	0.027	0.20	ug/l	50.0	ND	98	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/29/2024 10:48

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike (W4B2090-MS2)			Source: 4B20053-01			Prepared: 02/26/24			Analyzed: 02/29/24		
Thallium, Total	50.2	0.021	0.20	ug/l	50.0	ND	100	70-130			
Uranium, Total	71.3	0.02	0.20	ug/l	50.0	19.9	103	70-130			
Vanadium, Total	55.4	0.16	0.50	ug/l	50.0	5.06	101	70-130			
Zinc, Total	48.5	1.7	10	ug/l	50.0	ND	97	70-130			
Matrix Spike Dup (W4B2090-MSD1)			Source: 4B16119-03			Prepared: 02/26/24			Analyzed: 02/29/24		
Antimony, Total	50.0	0.089	0.50	ug/l	50.0	ND	100	70-130	0.06	30	
Beryllium, Total	50.2	0.029	0.10	ug/l	50.0	ND	100	70-130	1	30	
Cadmium, Total	49.6	0.042	0.20	ug/l	50.0	ND	99	70-130	0.2	30	
Chromium, Total	50.5	0.089	0.20	ug/l	50.0	0.123	101	70-130	2	30	
Nickel, Total	49.6	0.40	2.0	ug/l	50.0	ND	99	70-130	2	30	
Silver, Total	49.4	0.027	0.20	ug/l	50.0	ND	99	70-130	0.3	30	
Thallium, Total	50.0	0.021	0.20	ug/l	50.0	ND	100	70-130	0.4	30	
Uranium, Total	52.2	0.02	0.20	ug/l	50.0	2.37	100	70-130	0.5	30	
Vanadium, Total	50.8	0.16	0.50	ug/l	50.0	0.406	101	70-130	0.3	30	
Zinc, Total	49.3	1.7	10	ug/l	50.0	ND	98	70-130	1	30	
Matrix Spike Dup (W4B2090-MSD2)			Source: 4B20053-01			Prepared: 02/26/24			Analyzed: 02/29/24		
Antimony, Total	50.2	0.089	0.50	ug/l	50.0	0.271	100	70-130	1	30	
Beryllium, Total	49.6	0.029	0.10	ug/l	50.0	ND	99	70-130	1	30	
Cadmium, Total	48.4	0.042	0.20	ug/l	50.0	0.0425	97	70-130	2	30	
Chromium, Total	52.1	0.089	0.20	ug/l	50.0	2.50	99	70-130	0.2	30	
Nickel, Total	50.5	0.40	2.0	ug/l	50.0	2.23	96	70-130	0.8	30	
Silver, Total	48.5	0.027	0.20	ug/l	50.0	ND	97	70-130	0.7	30	
Thallium, Total	49.6	0.021	0.20	ug/l	50.0	ND	99	70-130	1	30	
Uranium, Total	70.3	0.02	0.20	ug/l	50.0	19.9	101	70-130	1	30	
Vanadium, Total	55.7	0.16	0.50	ug/l	50.0	5.06	101	70-130	0.6	30	
Zinc, Total	48.3	1.7	10	ug/l	50.0	ND	97	70-130	0.2	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/29/2024 10:48

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20048

Report Date: 4/08/2024

Received Date: 2/17/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

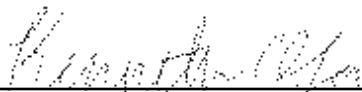
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/17/24 with the Chain-of-Custody document. The samples were received in good condition, at 14.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-6-S4	Brown & Caldwell	4B20048-01	Water	02/17/24 12:12	
AT-GS-6-S7	Brown & Caldwell	4B20048-02	Water	02/17/24 12:23	
AT-RES-6-S22	Brown & Caldwell	4B20048-03	Water	02/17/24 11:27	
Trip Blank	Brown & Caldwell	4B20048-05	Water	02/17/24 11:27	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3			⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
SM 2330B in Water				

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
SM 2330B in Water (Continued)				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:12 by Brown & Caldwell

4B20048-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	130	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.26	0.0090	0.10	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C0178	Preparation: _NONE (METALS)		Prepared: 03/04/24 13:52		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/04/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1475	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 17:47		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/17/24 17:55	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	0.64	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0713	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 15:26		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/13/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ism		
Nitrate as N	5.3	0.040	0.20	mg/l	1	02/17/24 18:14	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:14	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0973	Preparation: _NONE (WETCHEM)		Prepared: 03/12/24 20:02		Analyst: rob		
Phosphorus as PO ₄ , Total	0.26	0.021	0.030	mg/l	1	03/15/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1476	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 17:26		Analyst: ism		
Color	ND		3.0	Color Units	1	02/17/24 18:10	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	330	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	400	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0072	Preparation: _NONE (METALS)		Prepared: 03/01/24 11:50		Analyst: kjo		
Langelier Index @ 20 C	0.132	-20.0	-10.0	LSI	1	03/01/24	
Langelier Index @ 60 C	0.643	-20.0	-10.0	LSI	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:12 by Brown & Caldwell

4B20048-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0072	Preparation: _NONE (METALS)		Prepared: 03/01/24 11:50		Analyst: kjo		
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0205	Preparation: _NONE (METALS)		Prepared: 03/04/24 16:30		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	24.6	-100	-100	N/A	1	03/04/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 12:32		Analyst: bel		
Total Dissolved Solids	890	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B				Instr: AA02			
Batch ID: W4B1585	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 16:01		Analyst: mes		
pH	7.10	0.10	0.10	pH Units	1	02/20/24 17:50	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/26/24 10:51		Analyst: kvm		
Hardness as CaCO3, Total	494	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2088	Preparation: EPA 200.2		Prepared: 02/26/24 10:51		Analyst: kvm		
Boron, Total	150	1.3	10	ug/l	1	02/28/24	
Calcium, Total	112	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	52.1	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	38	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	37	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090	Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.65	0.074	0.40	ug/l	1	02/29/24	
Barium, Total	55	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	4.2	3.9	20	ug/l	1	02/29/24	J
Iron, Total	16	3.9	20	ug/l	1	02/29/24	J
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	19	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	19	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	2.7	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	3.7	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	110	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	590	0.036	0.20	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:12 by Brown & Caldwell

4B20048-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1497		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/17/24 16:29		Analyst: rea	
Heterotrophic Plate Count	320	2.0	2.0	MPN/mL	1	02/20/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1521		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 11:39		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/20/24	

Sample Results

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:12 by Brown & Caldwell

4B20048-01RE1 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946		Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM	
Sulfate as SO4	240	0.72	1.5	mg/l	3	03/03/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:23 by Brown & Caldwell

4B20048-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	110	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.29	0.0090	0.10	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C0178	Preparation: _NONE (METALS)		Prepared: 03/04/24 13:52		Analyst: aln		
Aggressive Index	12.5			AGI	1	03/04/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1475	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 17:47		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/17/24 17:55	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	0.64	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0713	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 15:26		Analyst: YMT		
TKN	0.24	0.065	0.10	mg/l	1	03/13/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ism		
Nitrate as N	1.7	0.040	0.20	mg/l	1	02/17/24 18:15	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:15	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0973	Preparation: _NONE (WETCHEM)		Prepared: 03/12/24 20:02		Analyst: rob		
Phosphorus as PO ₄ , Total	0.18	0.021	0.030	mg/l	1	03/15/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1476	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 17:26		Analyst: ism		
Color	ND		3.0	Color Units	1	02/17/24 18:10	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	340	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	410	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0072	Preparation: _NONE (METALS)		Prepared: 03/01/24 11:50		Analyst: kjo		
Langelier Index @ 20 C	0.548	-20.0	-10.0	LSI	1	03/01/24	
Langelier Index @ 60 C	1.06	-20.0	-10.0	LSI	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:23 by Brown & Caldwell

4B20048-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B							
Batch ID: W4C0072	Preparation: _NONE (METALS)						Analyst: kjo
Method: SM 2330B							
Batch ID: W4C0205	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	61.2	-100	-100	N/A	1	03/04/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	900	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+ -B							
Batch ID: W4B1585	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.43	0.10	0.10	pH Units	1	02/20/24 17:56	*
Metals by EPA 200 Series Methods							
Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	558	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7							
Batch ID: W4B2088	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	140	1.3	10	ug/l	1	02/28/24	
Calcium, Total	133	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	54.7	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	41	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	41	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8							
Batch ID: W4B2090	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.69	0.074	0.40	ug/l	1	02/29/24	
Barium, Total	53	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	1.9	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/29/24	
Iron, Total	59	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	3.0	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	3.7	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	77	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	800	0.036	0.20	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:23 by Brown & Caldwell

4B20048-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1497		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/17/24 16:29		Analyst: rea	
Heterotrophic Plate Count	2.0	2.0	2.0	MPN/mL	1	02/20/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1521		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 11:39		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/20/24	

Sample Results

(Continued)

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:23 by Brown & Caldwell

4B20048-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946		Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM	
Sulfate as SO4	260	0.72	1.5	mg/l	3	03/03/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:27 by Brown & Caldwell

4B20048-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1946	Preparation: _NONE (LC)		Prepared: 02/23/24 08:40		Analyst: CAM		
Chloride, Total	25	0.19	0.50	mg/l	1	03/02/24	
Fluoride, Total	0.75	0.0090	0.10	mg/l	1	03/02/24	
Sulfate as SO4	45	0.24	0.50	mg/l	1	03/02/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C0178	Preparation: _NONE (METALS)		Prepared: 03/04/24 13:52		Analyst: aln		
Aggressive Index	12.0			AGI	1	03/04/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1475	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 17:47		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/17/24 17:55	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	1.1	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0713	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 15:26		Analyst: YMT		
TKN	0.91	0.065	0.10	mg/l	1	03/13/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1473	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 14:16		Analyst: ism		
Nitrate as N	0.63	0.040	0.20	mg/l	1	02/17/24 18:16	
Nitrite as N	ND	42	100	ug/l	1	02/17/24 18:16	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0973	Preparation: _NONE (WETCHEM)		Prepared: 03/12/24 20:02		Analyst: rob		
Phosphorus as PO4, Total	0.033	0.021	0.030	mg/l	1	03/15/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1476	Preparation: _NONE (WETCHEM)		Prepared: 02/17/24 17:26		Analyst: ism		
Color	ND		3.0	Color Units	1	02/17/24 18:10	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO3	71	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO3	58	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO3	23	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0072	Preparation: _NONE (METALS)		Prepared: 03/01/24 11:50		Analyst: kjo		
Langelier Index @ 20 C	0.185	-20.0	-10.0	LSI	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:27 by Brown & Caldwell

4B20048-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0072	Preparation: _NONE (METALS)		Prepared: 03/01/24 11:50		Analyst: kjo		
Langelier Index @ 60 C	0.701	-20.0	-10.0	LSI	1	03/01/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0205	Preparation: _NONE (METALS)		Prepared: 03/04/24 16:30		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	1.37	-100	-100	N/A	1	03/04/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 12:32		Analyst: bel		
Total Dissolved Solids	160	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1585	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 16:01		Analyst: mes		
pH	8.42	0.10	0.10	pH Units	1	02/20/24 17:59	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/26/24 10:51		Analyst: kvm		
Hardness as CaCO3, Total	82.3	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2088	Preparation: EPA 200.2		Prepared: 02/26/24 10:51		Analyst: kvm		
Boron, Total	80	1.3	10	ug/l	1	02/28/24	
Calcium, Total	19.4	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	8.24	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	6.4	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	6.4	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090	Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.24	0.074	0.40	ug/l	1	02/29/24	J
Barium, Total	8.0	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	3.9	3.9	20	ug/l	1	02/29/24	J
Iron, Total	ND	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	0.63	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	0.50	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	28	0.10	1.0	mg/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:27 by Brown & Caldwell

4B20048-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Strontium, Total	100	0.036	0.20	ug/l	1	02/29/24	
Microbiological Parameters by Standard Methods							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1497		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/17/24 16:29		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/20/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1521		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 11:39		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/20/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/17/24 11:27 by Brown & Caldwell

4B20048-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2411		Preparation: EPA 5030B		Prepared: 02/29/24 07:20		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	530	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/01/24	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/17/24 11:27 by Brown & Caldwell

4B20048-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	ND		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/17/24 11:27 by Brown & Caldwell

4B20048-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2411

Preparation: EPA 5030B

Prepared: 02/29/24 07:20

Analyst: ADM

Surrogate(s)

1,2-Dichlorobenzene-d4	81%	Conc: 40.6	70-130			03/01/24	
4-Bromofluorobenzene	83%	Conc: 41.7	70-130			03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results BSK Associates Laboratory Fresno

Sample: AT-GS-6-S4
 4B20048-01 (Water)

Sampled: 02/17/24 12:12 by Brown & Caldwell

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/11/24	HT1.3
Chlorate	87		5.0	ug/L	1	03/11/24	
<i>Surrogate(s)</i>							
Dichloroacetate	95%		90-115			03/11/24	HT1.3
Dichloroacetate	95%		90-115			03/11/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.64		0.010	mg/L	1	03/01/24	

Sample: AT-GS-6-S7
 4B20048-02 (Water)

Sampled: 02/17/24 12:23 by Brown & Caldwell

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/09/24	HT1.3
Chlorate	200		5.0	ug/L	1	03/09/24	
<i>Surrogate(s)</i>							
Dichloroacetate	97%		90-115			03/09/24	HT1.3
Dichloroacetate	97%		90-115			03/09/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.50		0.010	mg/L	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Sample Results (Continued)

Sample: AT-RES-6-S22
 4B20048-03 (Water)

Sampled: 02/17/24 11:27 by Brown & Caldwell

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0355		Prepared: 03/09/24 03:24				Analyst: DXR
Chlorite	ND		0.0050	mg/L	1	03/09/24	HT1.3
Chlorate	140		5.0	ug/L	1	03/09/24	
<i>Surrogate(s)</i>							
Dichloroacetate	103%		90-115			03/09/24	HT1.3
Dichloroacetate	103%		90-115			03/09/24	
Method: EPA 317.0	Batch ID: AHC0136		Prepared: 03/08/24 18:06				Analyst: DXR
Bromate	1.0		1.0	ug/L	1	03/08/24	
General Chemistry							
Method: EPA 300.0	Batch ID: AHC0060		Prepared: 03/01/24 16:00				Analyst: AAS
Bromide	0.32		0.010	mg/L	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: AHC0136 - EPA 317.0									
Blank (AHC0136-BLK1) Prepared & Analyzed: 03/08/24									
Bromate	ND	1.0	ug/L						
LCS (AHC0136-BS1) Prepared & Analyzed: 03/08/24									
Bromate	10	1.0	ug/L	10.0		103 85-115			
LCS Dup (AHC0136-BSD1) Prepared & Analyzed: 03/08/24									
Bromate	10	1.0	ug/L	10.0		103 85-115	0	10	
Matrix Spike (AHC0136-MS1) Source: AHC0050-02 Prepared & Analyzed: 03/08/24									
Bromate	9.2	1.0	ug/L	10.0	ND	92 75-125			
Matrix Spike Dup (AHC0136-MSD1) Source: AHC0050-02 Prepared & Analyzed: 03/08/24									
Bromate	9.1	1.0	ug/L	10.0	ND	91 75-125	1	10	
Batch: AHC0355 - EPA 300.1									
Blank (AHC0355-BLK1) Prepared & Analyzed: 03/08/24									
Chlorate	ND	5.0	ug/L						
Chlorite	ND	0.0050	mg/L						
<i>Surrogate(s)</i>									
Dichloroacetate	0.498		mg/L	0.500		100 90-115			
Dichloroacetate	498		ug/L	500		100 90-115			
LCS (AHC0355-BS1) Prepared & Analyzed: 03/08/24									
Chlorate	200	5.0	ug/L	200		101 85-115			
Chlorite	0.21	0.0050	mg/L	0.200		104 85-115			
<i>Surrogate(s)</i>									
Dichloroacetate	0.517		mg/L	0.500		103 90-115			
Dichloroacetate	517		ug/L	500		103 90-115			
LCS Dup (AHC0355-BSD1) Prepared & Analyzed: 03/08/24									
Chlorate	200	5.0	ug/L	200		99 85-115	2	10	
Chlorite	0.21	0.0050	mg/L	0.200		107 85-115	3	10	
<i>Surrogate(s)</i>									
Dichloroacetate	0.544		mg/L	0.500		109 90-115			
Dichloroacetate	544		ug/L	500		109 90-115			
Matrix Spike (AHC0355-MS1) Source: AHC0052-01 Prepared & Analyzed: 03/08/24									
Chlorate	92	5.0	ug/L	100	ND	92 75-125			
Chlorite	0.098	0.0050	mg/L	0.100	ND	98 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.529		mg/L	0.500		106 90-115			
Dichloroacetate	529		ug/L	500		106 90-115			
Matrix Spike (AHC0355-MS2) Source: SHC0084-02 Prepared & Analyzed: 03/09/24									
Chlorate	150	5.0	ug/L	100	97	53 75-125			MS1.0
Chlorite	0.087	0.0050	mg/L	0.100	ND	87 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.546		mg/L	0.500		109 90-115			
Dichloroacetate	546		ug/L	500		109 90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0355 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0355-MSD1)			Source: AHC0052-01			Prepared & Analyzed: 03/08/24				
Chlorate	110	5.0	ug/L	100	ND	105	75-125	13	10	MS2.0
Chlorite	0.099	0.0050	mg/L	0.100	ND	99	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.539		mg/L	0.500		108	90-115			
Dichloroacetate	539		ug/L	500		108	90-115			
Matrix Spike Dup (AHC0355-MSD2)			Source: SHC0084-02			Prepared & Analyzed: 03/09/24				
Chlorate	150	5.0	ug/L	100	97	53	75-125	0.5	10	MS1.0
Chlorite	0.098	0.0050	mg/L	0.100	ND	98	75-125	11	10	MS2.0
<i>Surrogate(s)</i>										
Dichloroacetate	0.540		mg/L	0.500		108	90-115			
Dichloroacetate	540		ug/L	500		108	90-115			
Batch: AHC0569 - EPA 300.1										
Blank (AHC0569-BLK1)			Prepared & Analyzed: 03/11/24							
Chlorate	ND	5.0	ug/L							
Chlorite	ND	0.0050	mg/L							
<i>Surrogate(s)</i>										
Dichloroacetate	0.508		mg/L	0.500		102	90-115			
Dichloroacetate	508		ug/L	500		102	90-115			
LCS (AHC0569-BS1)			Prepared & Analyzed: 03/11/24							
Chlorate	200	5.0	ug/L	200		99	85-115			
Chlorite	0.20	0.0050	mg/L	0.200		101	85-115			
<i>Surrogate(s)</i>										
Dichloroacetate	0.499		mg/L	0.500		100	90-115			
Dichloroacetate	499		ug/L	500		100	90-115			
LCS Dup (AHC0569-BSD1)			Prepared & Analyzed: 03/11/24							
Chlorate	210	5.0	ug/L	200		104	85-115	5	10	
Chlorite	0.21	0.0050	mg/L	0.200		106	85-115	5	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.537		mg/L	0.500		107	90-115			
Dichloroacetate	537		ug/L	500		107	90-115			
Matrix Spike (AHC0569-MS1)			Source: AHC1057-01			Prepared & Analyzed: 03/11/24				
Chlorate	160	5.0	ug/L	100	110	45	75-125			MS1.0
Chlorite	0.080	0.0050	mg/L	0.100	ND	80	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.494		mg/L	0.500		99	90-115			
Dichloroacetate	494		ug/L	500		99	90-115			
Matrix Spike Dup (AHC0569-MSD1)			Source: AHC1057-01			Prepared & Analyzed: 03/11/24				
Chlorate	160	5.0	ug/L	100	110	46	75-125	0.2	10	MS1.0
Chlorite	0.077	0.0050	mg/L	0.100	ND	77	75-125	4	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.518		mg/L	0.500		104	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0569 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0569-MSD1)		Source: AHC1057-01			Prepared & Analyzed: 03/11/24					
<i>Surrogate(s)</i>										
Dichloroacetate	518		ug/L	500		104	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0060 - EPA 300.0										
Blank (AHC0060-BLK1)					Prepared & Analyzed: 03/01/24					
Bromide	ND	0.010	mg/L							
LCS (AHC0060-BS1)					Prepared & Analyzed: 03/01/24					
Bromide	0.19	0.010	mg/L	0.200		96	90-110			
Matrix Spike (AHC0060-MS1)		Source: AHB3708-01			Prepared & Analyzed: 03/01/24					
Bromide	0.096	0.010	mg/L	0.100	ND	96	80-120			
Matrix Spike (AHC0060-MS2)		Source: AHC0055-03			Prepared & Analyzed: 03/01/24					
Bromide	0.40	0.010	mg/L	0.100	0.34	60	80-120			MS1.0
Matrix Spike Dup (AHC0060-MSD1)		Source: AHB3708-01			Prepared & Analyzed: 03/01/24					
Bromide	0.097	0.010	mg/L	0.100	ND	97	80-120	1	10	
Matrix Spike Dup (AHC0060-MSD2)		Source: AHC0055-03			Prepared & Analyzed: 03/01/24					
Bromide	0.41	0.010	mg/L	0.100	0.34	69	80-120	2	10	MS1.0

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1946 - EPA 300.0											
Blank (W4B1946-BLK1)					Prepared: 02/23/24 Analyzed: 03/02/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1946-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24						
Chloride, Total	20.3	0.19	0.50	mg/l	20.0		102	90-110			
Fluoride, Total	1.99	0.0090	0.10	mg/l	2.00		99	90-110			
Sulfate as SO4	20.2	0.24	0.50	mg/l	20.0		101	90-110			
Matrix Spike (W4B1946-MS1)					Source: 4B21187-01		Prepared: 02/23/24 Analyzed: 03/02/24				
Chloride, Total	282	1.9	5.0	mg/l	200	65.0	108	76-118			
Fluoride, Total	20.9	0.090	1.0	mg/l	20.0	0.336	103	86-107			
Sulfate as SO4	391	2.4	5.0	mg/l	200	161	115	78-111			MS-01
Matrix Spike (W4B1946-MS2)					Source: 4B21190-01		Prepared: 02/23/24 Analyzed: 03/03/24				
Chloride, Total	228	1.9	5.0	mg/l	200		114	76-118			
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.283	103	86-107			
Sulfate as SO4	255	2.4	5.0	mg/l	200		128	78-111			
Matrix Spike Dup (W4B1946-MSD1)					Source: 4B21187-01		Prepared: 02/23/24 Analyzed: 03/02/24				
Chloride, Total	281	1.9	5.0	mg/l	200	65.0	108	76-118	0.4	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.336	103	86-107	0.3	20	
Sulfate as SO4	390	2.4	5.0	mg/l	200	161	114	78-111	0.3	20	MS-01
Matrix Spike Dup (W4B1946-MSD2)					Source: 4B21190-01		Prepared: 02/23/24 Analyzed: 03/03/24				
Chloride, Total	228	1.9	5.0	mg/l	200		114	76-118	0.2	20	
Fluoride, Total	20.8	0.090	1.0	mg/l	20.0	0.283	103	86-107	0.1	20	
Sulfate as SO4	255	2.4	5.0	mg/l	200		128	78-111	0.04	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1473 - EPA 353.2											
Blank (W4B1473-BLK1)					Prepared & Analyzed: 02/17/24						
Nitrate as N	ND	0.040	0.20	mg/l							
Nitrite as N	ND	42	100	ug/l							
LCS (W4B1473-BS1)					Prepared & Analyzed: 02/17/24						
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101	90-110			
Nitrite as N	1000	42	100	ug/l	1000		100	90-110			
Matrix Spike (W4B1473-MS1)					Source: 4B16114-01 Prepared & Analyzed: 02/17/24						
Nitrate as N	8.83	0.040	0.20	mg/l	2.00	6.86	98	90-110			
Nitrite as N	1010	42	100	ug/l	1000	ND	101	90-110			
Matrix Spike Dup (W4B1473-MSD1)					Source: 4B16114-01 Prepared & Analyzed: 02/17/24						
Nitrate as N	8.82	0.040	0.20	mg/l	2.00	6.86	98	90-110	0.1	20	
Nitrite as N	1010	42	100	ug/l	1000	ND	101	90-110	0	20	
Batch: W4B1475 - EPA 140.1											
Blank (W4B1475-BLK1)					Prepared & Analyzed: 02/17/24						
Threshold Odor Number	1.0		1.0	T.O.N.							J
Duplicate (W4B1475-DUP1)					Source: 4B20048-01 Prepared & Analyzed: 02/17/24						
Threshold Odor Number	1.0		1.0	T.O.N.		1.0			0	20	J
Batch: W4B1476 - SM 2120B											
Blank (W4B1476-BLK1)					Prepared & Analyzed: 02/17/24						
Color	ND		3.0	Color Units							
LCS (W4B1476-BS1)					Prepared & Analyzed: 02/17/24						
Color	10.0		3.0	Color Units	10.0		100	95-105			
Duplicate (W4B1476-DUP1)					Source: 4B20048-01 Prepared & Analyzed: 02/17/24						
Color	ND		3.0	Color Units		ND				10	
Batch: W4B1508 - SM 2320B											
Blank (W4B1508-BLK1)					Prepared & Analyzed: 02/20/24						
Alkalinity as CaCO3	ND	7.2	20	mg/l							
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l							
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l							
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l							
LCS (W4B1508-BS1)					Prepared & Analyzed: 02/20/24						
Alkalinity as CaCO3	89.1	7.2	20	mg/l	87.8		101	94-108			
Bicarbonate Alkalinity as HCO3	109	8.8	24	mg/l	107		101	95-108			
Duplicate (W4B1508-DUP1)					Source: 4B01037-01 Prepared & Analyzed: 02/20/24						
Alkalinity as CaCO3	333	7.2	20	mg/l		335			0.6	15	
Bicarbonate Alkalinity as HCO3	406	8.8	24	mg/l		408			0.6	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND				200	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1515 - SM 2540C										
Blank (W4B1515-BLK1)										
Total Dissolved Solids	ND	4.0	10	mg/l	Prepared & Analyzed: 02/20/24					
LCS (W4B1515-BS1)										
Total Dissolved Solids	801	4.0	10	mg/l	824		97 97-103			
Duplicate (W4B1515-DUP1)										
Total Dissolved Solids	12300	4.0	10	mg/l		12400		1	10	
Duplicate (W4B1515-DUP2)										
Total Dissolved Solids	1050	4.0	10	mg/l		1070		2	10	
Batch: W4B1585 - SM 4500H+-B										
LCS (W4B1585-BS1)										
pH	6.94	0.10	0.10	pH Units	6.86		101 98.8-101			
Duplicate (W4B1585-DUP1)										
pH	7.18	0.10	0.10	pH Units	7.10			1	3.1	
Batch: W4C0713 - EPA 351.2										
Blank (W4C0713-BLK1)										
TKN	ND	0.065	0.10	mg/l	Prepared: 03/08/24 Analyzed: 03/13/24					
Blank (W4C0713-BLK2)										
TKN	ND	0.065	0.10	mg/l	Prepared: 03/08/24 Analyzed: 03/13/24					
LCS (W4C0713-BS1)										
TKN	1.01	0.065	0.10	mg/l	1.00		101 90-110			
LCS (W4C0713-BS2)										
TKN	0.955	0.065	0.10	mg/l	1.00		95 90-110			
Matrix Spike (W4C0713-MS1)										
TKN	6.40	0.26	0.40	mg/l	4.00	3.40	75 90-110			MS-01
Matrix Spike (W4C0713-MS2)										
TKN	16.0	0.52	0.80	mg/l	8.00	14.2	23 90-110			MS-02
Matrix Spike Dup (W4C0713-MSD1)										
TKN	7.51	0.26	0.40	mg/l	4.00	3.40	103 90-110	16	10	R-02
Matrix Spike Dup (W4C0713-MSD2)										
TKN	16.2	0.52	0.80	mg/l	8.00	14.2	26 90-110	1	10	MS-02
Batch: W4C0795 - EPA 350.1										
Blank (W4C0795-BLK1)										
Ammonia as N	ND	0.017	0.10	mg/l	Prepared: 03/11/24 Analyzed: 03/12/24					
Blank (W4C0795-BLK2)										
Ammonia as N	ND	0.017	0.10	mg/l	Prepared: 03/11/24 Analyzed: 03/12/24					
LCS (W4C0795-BS1)										
Ammonia as N	0.246	0.017	0.10	mg/l	0.250		99 90-110			
LCS (W4C0795-BS2)										
					Prepared: 03/11/24 Analyzed: 03/12/24					

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4C0795 - EPA 350.1 (Continued)											
LCS (W4C0795-BS2)											
Ammonia as N	0.249	0.017	0.10	mg/l	0.250		99	90-110			
Matrix Spike (W4C0795-MS1) Source: 4B02004-01 Prepared: 03/11/24 Analyzed: 03/12/24											
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	0.0182	95	90-110			
Matrix Spike (W4C0795-MS2) Source: 4B16076-04 Prepared: 03/11/24 Analyzed: 03/12/24											
Ammonia as N	0.349	0.017	0.10	mg/l	0.250	0.106	97	90-110			
Matrix Spike Dup (W4C0795-MSD1) Source: 4B02004-01 Prepared: 03/11/24 Analyzed: 03/12/24											
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	0.0182	95	90-110	0.3	15	
Matrix Spike Dup (W4C0795-MSD2) Source: 4B16076-04 Prepared: 03/11/24 Analyzed: 03/12/24											
Ammonia as N	0.346	0.017	0.10	mg/l	0.250	0.106	96	90-110	0.9	15	
Batch: W4C0973 - EPA 365.3											
Blank (W4C0973-BLK1) Prepared: 03/12/24 Analyzed: 03/15/24											
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l							
LCS (W4C0973-BS1) Prepared: 03/12/24 Analyzed: 03/15/24											
Phosphorus as PO4, Total	0.593	0.021	0.030	mg/l	0.612		97	90-110			
Matrix Spike (W4C0973-MS1) Source: 4B20178-07 Prepared: 03/12/24 Analyzed: 03/15/24											
Phosphorus as PO4, Total	0.719	0.021	0.030	mg/l	0.612	0.128	97	90-110			
Matrix Spike Dup (W4C0973-MSD1) Source: 4B20178-07 Prepared: 03/12/24 Analyzed: 03/15/24											
Phosphorus as PO4, Total	0.733	0.021	0.030	mg/l	0.612	0.128	99	90-110	2	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2088 - EPA 200.7									
Blank (W4B2088-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	2.12	1.3	10	ug/l					J
Calcium, Total	ND	0.0240	0.500	mg/l					
Magnesium, Total	ND	0.0148	0.500	mg/l					
Silica as SiO ₂ , Dissolved	ND	0.0086	0.10	mg/l					
Silica as SiO ₂ , Total	ND	0.0086	0.10	mg/l					
LCS (W4B2088-BS1)					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	227	1.3	10	ug/l	200	148	113 85-115		
Calcium, Total	48.1	0.0240	0.500	mg/l	50.2	115	96 85-115		
Magnesium, Total	48.1	0.0148	0.500	mg/l	50.2	53.4	96 85-115		
Silica as SiO ₂ , Dissolved	44.0	0.0086	0.10	mg/l	43.2	37.4	102 85-115		
Silica as SiO ₂ , Total	44.0	0.0086	0.10	mg/l	43.2	38.2	102 85-115		
Matrix Spike (W4B2088-MS1)					Source: 4B16119-01 Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	380	1.3	10	ug/l	200	148	116 70-130		
Calcium, Total	160	0.0240	0.500	mg/l	50.2	115	91 70-130		
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	53.4	95 70-130		
Silica as SiO ₂ , Dissolved	82.4	0.0086	0.10	mg/l	43.2	37.4	104 70-130		
Silica as SiO ₂ , Total	82.4	0.0086	0.10	mg/l	43.2	38.2	102 70-130		
Matrix Spike (W4B2088-MS2)					Source: 4B20048-01 Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	370	1.3	10	ug/l	200	148	111 70-130		
Calcium, Total	155	0.0240	0.500	mg/l	50.2	112	86 70-130		
Magnesium, Total	97.9	0.0148	0.500	mg/l	50.2	52.1	91 70-130		
Silica as SiO ₂ , Dissolved	79.6	0.0086	0.10	mg/l	43.2	37.8	97 70-130		
Silica as SiO ₂ , Total	79.6	0.0086	0.10	mg/l	43.2	37.3	98 70-130		
Matrix Spike Dup (W4B2088-MSD1)					Source: 4B16119-01 Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	371	1.3	10	ug/l	200	148	111 70-130	3	30
Calcium, Total	156	0.0240	0.500	mg/l	50.2	115	83 70-130	3	30
Magnesium, Total	98.4	0.0148	0.500	mg/l	50.2	53.4	90 70-130	3	30
Silica as SiO ₂ , Dissolved	80.5	0.0086	0.10	mg/l	43.2	37.4	100 70-130	2	30
Silica as SiO ₂ , Total	80.5	0.0086	0.10	mg/l	43.2	38.2	98 70-130	2	30
Matrix Spike Dup (W4B2088-MSD2)					Source: 4B20048-01 Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	382	1.3	10	ug/l	200	148	117 70-130	3	30
Calcium, Total	160	0.0240	0.500	mg/l	50.2	112	96 70-130	3	30
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.1	97 70-130	3	30
Silica as SiO ₂ , Dissolved	82.8	0.0086	0.10	mg/l	43.2	37.8	104 70-130	4	30
Silica as SiO ₂ , Total	82.8	0.0086	0.10	mg/l	43.2	37.3	105 70-130	4	30
Batch: W4B2090 - EPA 200.8									
Blank (W4B2090-BLK1)					Prepared: 02/26/24 Analyzed: 02/29/24				
Aluminum, Total	ND	4.4	20	ug/l					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Blank (W4B2090-BLK1)					Prepared: 02/26/24 Analyzed: 02/29/24						
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W4B2090-BS1)											
					Prepared: 02/26/24 Analyzed: 02/29/24						
Aluminum, Total	47.6	4.4	20	ug/l	50.0		95	85-115			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	48.6	0.14	1.0	ug/l	50.0		97	85-115			
Copper, Total	51.1	0.23	0.50	ug/l	50.0		102	85-115			
Iron, Dissolved	1200	3.9	20	ug/l	1050		115	85-115			
Iron, Total	1200	3.9	20	ug/l	1050		115	85-115			
Lead, Total	49.7	0.083	0.20	ug/l	50.0		99	85-115			
Manganese, Dissolved	50.2	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	50.2	0.23	1.0	ug/l	50.0		100	85-115			
Potassium, Total	2.17	0.068	0.50	mg/l	2.05		106	85-115			
Selenium, Total	49.4	0.067	0.40	ug/l	50.0		99	85-115			
Sodium, Total	2.20	0.10	1.0	mg/l	2.05		107	85-115			
Strontium, Total	49.4	0.036	0.20	ug/l	50.0		99	85-115			
Matrix Spike (W4B2090-MS1)											
					Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24						
Aluminum, Total	46.8	4.4	20	ug/l	50.0	ND	93	70-130			
Arsenic, Total	51.3	0.074	0.40	ug/l	50.0	0.272	102	70-130			
Barium, Total	59.6	0.14	1.0	ug/l	50.0	10.3	99	70-130			
Copper, Total	48.9	0.23	0.50	ug/l	50.0	ND	98	70-130			
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130			
Iron, Total	1140	3.9	20	ug/l	1050	ND	109	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	49.2	0.11	1.0	ug/l	50.0	ND	98	70-130			
Manganese, Total	49.2	0.23	1.0	ug/l	50.0	ND	98	70-130			
Potassium, Total	2.83	0.068	0.50	mg/l	2.05	0.757	101	70-130			
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	0.422	99	70-130			
Sodium, Total	31.0	0.10	1.0	mg/l	2.05	31.0	0.6	70-130			

MS-02

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike (W4B2090-MS1) Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24											
Strontium, Total	187	0.036	0.20	ug/l	50.0	136	101	70-130			
Matrix Spike (W4B2090-MS2) Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24											
Aluminum, Total	46.9	4.4	20	ug/l	50.0	ND	94	70-130			
Arsenic, Total	51.7	0.074	0.40	ug/l	50.0	0.716	102	70-130			
Barium, Total	107	0.14	1.0	ug/l	50.0	55.2	103	70-130			
Copper, Total	48.1	0.23	0.50	ug/l	50.0	ND	96	70-130			
Iron, Dissolved	1170	3.9	20	ug/l	1050	ND	111	70-130			
Iron, Total	1170	3.9	20	ug/l	1050	29.7	108	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	66.2	0.11	1.0	ug/l	50.0	18.1	96	70-130			
Manganese, Total	66.2	0.23	1.0	ug/l	50.0	18.6	95	70-130			
Potassium, Total	4.71	0.068	0.50	mg/l	2.05	2.72	97	70-130			
Selenium, Total	52.2	0.067	0.40	ug/l	50.0	3.78	97	70-130			
Sodium, Total	107	0.10	1.0	mg/l	2.05	109	NR	70-130			MS-02
Strontium, Total	645	0.036	0.20	ug/l	50.0	599	93	70-130			
Matrix Spike Dup (W4B2090-MSD1) Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24											
Aluminum, Total	46.6	4.4	20	ug/l	50.0	ND	93	70-130	0.3	30	
Arsenic, Total	50.8	0.074	0.40	ug/l	50.0	0.272	101	70-130	1	30	
Barium, Total	60.0	0.14	1.0	ug/l	50.0	10.3	99	70-130	0.6	30	
Copper, Total	50.1	0.23	0.50	ug/l	50.0	ND	100	70-130	2	30	
Iron, Dissolved	1180	3.9	20	ug/l	1050	ND	113	70-130	4	30	
Iron, Total	1180	3.9	20	ug/l	1050	ND	113	70-130	4	30	
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101	70-130	0.2	30	
Manganese, Dissolved	50.1	0.11	1.0	ug/l	50.0	ND	100	70-130	2	30	
Manganese, Total	50.1	0.23	1.0	ug/l	50.0	ND	100	70-130	2	30	
Potassium, Total	2.88	0.068	0.50	mg/l	2.05	0.757	103	70-130	2	30	
Selenium, Total	49.0	0.067	0.40	ug/l	50.0	0.422	97	70-130	2	30	
Sodium, Total	31.9	0.10	1.0	mg/l	2.05	31.0	48	70-130	3	30	MS-02
Strontium, Total	186	0.036	0.20	ug/l	50.0	136	99	70-130	0.5	30	
Matrix Spike Dup (W4B2090-MSD2) Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24											
Aluminum, Total	47.2	4.4	20	ug/l	50.0	ND	94	70-130	0.5	30	
Arsenic, Total	51.0	0.074	0.40	ug/l	50.0	0.716	100	70-130	1	30	
Barium, Total	106	0.14	1.0	ug/l	50.0	55.2	100	70-130	1	30	
Copper, Total	48.6	0.23	0.50	ug/l	50.0	ND	97	70-130	1	30	
Iron, Dissolved	1200	3.9	20	ug/l	1050	ND	114	70-130	3	30	
Iron, Total	1200	3.9	20	ug/l	1050	29.7	111	70-130	3	30	
Lead, Total	49.7	0.083	0.20	ug/l	50.0	ND	99	70-130	1	30	
Manganese, Dissolved	66.5	0.11	1.0	ug/l	50.0	18.1	97	70-130	0.5	30	
Manganese, Total	66.5	0.23	1.0	ug/l	50.0	18.6	96	70-130	0.5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B2090-MSD2)		Source: 4B20053-01			Prepared: 02/26/24		Analyzed: 02/29/24				
Potassium, Total	4.75	0.068	0.50	mg/l	2.05	2.72	99	70-130	0.8	30	
Selenium, Total	51.9	0.067	0.40	ug/l	50.0	3.78	96	70-130	0.7	30	
Sodium, Total	107	0.10	1.0	mg/l	2.05	109	NR	70-130	0.02	30	MS-02
Strontium, Total	639	0.036	0.20	ug/l	50.0	599	81	70-130	1	30	

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1521 - SM 9221B											
Blank (W4B1521-BLK1)		Prepared: 02/18/24 Analyzed: 02/20/24									
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2											
Blank (W4B2411-BLK1)						Prepared: 02/29/24 Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)											
Blank (W4B2411-BLK1)						Prepared: 02/29/24 Analyzed: 03/01/24					
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	39.7			ug/l	50.0		79	70-130			
4-Bromofluorobenzene	41.6			ug/l	50.0		83	70-130			
LCS (W4B2411-BS1)						Prepared: 02/29/24 Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	5.01	0.24	0.50	ug/l	5.00		100	70-130			
1,1,1-Trichloroethane	4.79	0.26	0.50	ug/l	5.00		96	70-130			
1,1,2,2-Tetrachloroethane	4.43	0.20	0.50	ug/l	5.00		89	70-130			
1,1,2-Trichloroethane	4.72	0.19	0.50	ug/l	5.00		94	70-130			
1,1-Dichloroethane	4.44	0.27	0.50	ug/l	5.00		89	70-130			
1,1-Dichloroethene	4.33	0.16	0.50	ug/l	5.00		87	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)											
LCS (W4B2411-BS1)						Prepared: 02/29/24 Analyzed: 03/01/24					
1,1-Dichloropropene	4.34	0.14	0.50	ug/l	5.00	87	70-130				
1,2,3-Trichlorobenzene	5.24	0.40	0.50	ug/l	5.00	105	70-130				
1,2,4-Trichlorobenzene	5.73	0.17	0.50	ug/l	5.00	115	70-130				
1,2,4-Trimethylbenzene	4.63	0.20	0.50	ug/l	5.00	93	70-130				
1,2-Dichloroethane	4.51	0.24	0.50	ug/l	5.00	90	70-130				
1,2-Dichloropropane	4.33	0.13	0.50	ug/l	5.00	87	70-130				
1,3,5-Trimethylbenzene	4.53	0.17	0.50	ug/l	5.00	91	70-130				
1,3-Dichloropropane	4.75	0.27	0.50	ug/l	5.00	95	70-130				
2,2-Dichloropropane	4.80	0.17	0.50	ug/l	5.00	96	70-130				
2-Butanone	3.98	1.5	5.0	ug/l	5.00	80	70-130				J
2-Chlorotoluene	5.04	0.15	0.50	ug/l	5.00	101	70-130				
2-Hexanone	4.54	1.2	5.0	ug/l	5.00	91	70-130				J
4-Chlorotoluene	4.91	0.15	0.50	ug/l	5.00	98	70-130				
4-Methyl-2-pentanone	4.46	1.8	5.0	ug/l	5.00	89	70-130				J
Acetone	43.1	3.1	5.0	ug/l	50.0	86	70-130				
Benzene	4.58	0.15	0.50	ug/l	5.00	92	70-130				
Bromobenzene	5.13	0.15	0.50	ug/l	5.00	103	70-130				
Bromochloromethane	4.16	0.15	0.50	ug/l	5.00	83	70-130				
Bromodichloromethane	4.55	0.24	0.50	ug/l	5.00	91	70-130				
Bromoform	5.37	0.38	0.50	ug/l	5.00	107	70-130				
Bromomethane	4.69	0.27	0.50	ug/l	5.00	94	70-130				
Carbon tetrachloride	4.96	0.27	0.50	ug/l	5.00	99	70-130				
Chlorobenzene	5.74	0.15	0.50	ug/l	5.00	115	70-130				
Chloroethane	4.41	0.17	0.50	ug/l	5.00	88	70-130				
Chloroform	4.59	0.27	0.50	ug/l	5.00	92	70-130				
Chloromethane	3.81	0.23	0.50	ug/l	5.00	76	70-130				
cis-1,2-Dichloroethene	4.35	0.25	0.50	ug/l	5.00	87	70-130				
cis-1,3-Dichloropropene	4.83	0.30	0.50	ug/l	5.00	97	70-130				
Dibromochloromethane	5.11	0.20	0.50	ug/l	5.00	102	70-130				
Dibromomethane	4.65	0.20	0.50	ug/l	5.00	93	70-130				
Dichlorodifluoromethane (Freon 12)	4.53	0.45	0.50	ug/l	5.00	91	70-130				
Di-isopropyl ether	16.5	1.1	2.0	ug/l	20.0	83	70-130				
Ethyl tert-butyl ether	18.7	1.0	2.0	ug/l	20.0	93	70-130				
Ethylbenzene	4.70	0.21	0.50	ug/l	5.00	94	70-130				
Freon 113	4.74	1.5	5.0	ug/l	5.00	95	70-130				J
Hexachlorobutadiene	5.50	0.40	0.50	ug/l	5.00	110	70-130				
Isopropylbenzene	4.66	0.18	0.50	ug/l	5.00	93	70-130				
m,p-Xylene	4.58	0.33	0.50	ug/l	5.00	92	70-130				
m-Dichlorobenzene	5.01	0.14	0.50	ug/l	5.00	100	70-130				

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)										
LCS (W4B2411-BS1)					Prepared: 02/29/24 Analyzed: 03/01/24					
Methyl tert-butyl ether (MTBE)	18.9	0.94	2.0	ug/l	20.0	94	70-130			
Methylene chloride	4.00	0.30	0.50	ug/l	5.00	80	70-130			
Naphthalene	4.89	0.35	0.50	ug/l	5.00	98	70-130			
n-Butylbenzene	4.79	0.29	0.50	ug/l	5.00	96	70-130			
n-Propylbenzene	4.39	0.18	0.50	ug/l	5.00	88	70-130			
o-Dichlorobenzene	4.93	0.19	0.50	ug/l	5.00	99	70-130			
o-Xylene	4.86	0.20	0.50	ug/l	5.00	97	70-130			
p-Dichlorobenzene	5.16	0.18	0.50	ug/l	5.00	103	70-130			
p-Isopropyltoluene	4.66	0.25	0.50	ug/l	5.00	93	70-130			
sec-Butylbenzene	4.53	0.24	0.50	ug/l	5.00	91	70-130			
Styrene	4.81	0.19	0.50	ug/l	5.00	96	70-130			
Tert-amyl methyl ether	19.2	0.59	2.0	ug/l	20.0	96	70-130			
tert-Butylbenzene	4.68	0.18	0.50	ug/l	5.00	94	70-130			
Tetrachloroethene	5.55	0.18	0.50	ug/l	5.00	111	70-130			
Toluene	4.71	0.29	0.50	ug/l	5.00	94	70-130			
trans-1,2-Dichloroethene	4.33	0.26	0.50	ug/l	5.00	87	70-130			
trans-1,3-Dichloropropene	5.19	0.32	0.50	ug/l	5.00	104	70-130			
Trichloroethene	4.83	0.18	0.50	ug/l	5.00	97	70-130			
Trichlorofluoromethane	4.92	0.18	0.50	ug/l	5.00	98	70-130			
Vinyl chloride	4.28	0.18	0.50	ug/l	5.00	86	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0	90	70-130			
4-Bromofluorobenzene	45.3			ug/l	50.0	91	70-130			
LCS Dup (W4B2411-BS1)					Prepared: 02/29/24 Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	4.87	0.24	0.50	ug/l	5.00	97	70-130	3	30	
1,1,1-Trichloroethane	4.53	0.26	0.50	ug/l	5.00	91	70-130	6	30	
1,1,2,2-Tetrachloroethane	4.42	0.20	0.50	ug/l	5.00	88	70-130	0.4	30	
1,1,2-Trichloroethane	4.54	0.19	0.50	ug/l	5.00	91	70-130	4	30	
1,1-Dichloroethane	4.32	0.27	0.50	ug/l	5.00	86	70-130	3	30	
1,1-Dichloroethene	4.17	0.16	0.50	ug/l	5.00	83	70-130	4	30	
1,1-Dichloropropene	4.12	0.14	0.50	ug/l	5.00	82	70-130	5	30	
1,2,3-Trichlorobenzene	5.01	0.40	0.50	ug/l	5.00	100	70-130	5	30	
1,2,4-Trichlorobenzene	5.08	0.17	0.50	ug/l	5.00	102	70-130	12	30	
1,2,4-Trimethylbenzene	4.48	0.20	0.50	ug/l	5.00	90	70-130	3	30	
1,2-Dichloroethane	4.47	0.24	0.50	ug/l	5.00	89	70-130	0.9	30	
1,2-Dichloropropane	4.24	0.13	0.50	ug/l	5.00	85	70-130	2	30	
1,3,5-Trimethylbenzene	4.39	0.17	0.50	ug/l	5.00	88	70-130	3	30	
1,3-Dichloropropane	4.58	0.27	0.50	ug/l	5.00	92	70-130	4	30	
2,2-Dichloropropane	4.71	0.17	0.50	ug/l	5.00	94	70-130	2	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)										
LCS Dup (W4B2411-BSD1)					Prepared: 02/29/24 Analyzed: 03/01/24					
2-Butanone	4.01	1.5	5.0	ug/l	5.00	80	70-130	0.8	30	J
2-Chlorotoluene	4.84	0.15	0.50	ug/l	5.00	97	70-130	4	30	
2-Hexanone	4.52	1.2	5.0	ug/l	5.00	90	70-130	0.4	30	J
4-Chlorotoluene	4.80	0.15	0.50	ug/l	5.00	96	70-130	2	30	
4-Methyl-2-pentanone	4.62	1.8	5.0	ug/l	5.00	92	70-130	4	30	J
Acetone	44.3	3.1	5.0	ug/l	50.0	89	70-130	3	30	
Benzene	4.43	0.15	0.50	ug/l	5.00	89	70-130	3	30	
Bromobenzene	5.04	0.15	0.50	ug/l	5.00	101	70-130	2	30	
Bromochloromethane	4.18	0.15	0.50	ug/l	5.00	84	70-130	0.5	30	
Bromodichloromethane	4.41	0.24	0.50	ug/l	5.00	88	70-130	3	30	
Bromoform	5.31	0.38	0.50	ug/l	5.00	106	70-130	1	30	
Bromomethane	4.55	0.27	0.50	ug/l	5.00	91	70-130	3	30	
Carbon tetrachloride	4.69	0.27	0.50	ug/l	5.00	94	70-130	6	30	
Chlorobenzene	5.09	0.15	0.50	ug/l	5.00	102	70-130	12	30	
Chloroethane	4.19	0.17	0.50	ug/l	5.00	84	70-130	5	30	
Chloroform	4.42	0.27	0.50	ug/l	5.00	88	70-130	4	30	
Chloromethane	3.77	0.23	0.50	ug/l	5.00	75	70-130	1	30	
cis-1,2-Dichloroethene	4.22	0.25	0.50	ug/l	5.00	84	70-130	3	30	
cis-1,3-Dichloropropene	4.71	0.30	0.50	ug/l	5.00	94	70-130	2	30	
Dibromochloromethane	4.88	0.20	0.50	ug/l	5.00	98	70-130	4	30	
Dibromomethane	4.54	0.20	0.50	ug/l	5.00	91	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	3.88	0.45	0.50	ug/l	5.00	78	70-130	15	30	
Di-isopropyl ether	16.6	1.1	2.0	ug/l	20.0	83	70-130	0.1	30	
Ethyl tert-butyl ether	18.7	1.0	2.0	ug/l	20.0	93	70-130	0.07	30	
Ethylbenzene	4.39	0.21	0.50	ug/l	5.00	88	70-130	7	30	
Freon 113	4.23	1.5	5.0	ug/l	5.00	85	70-130	11	30	J
Hexachlorobutadiene	5.08	0.40	0.50	ug/l	5.00	102	70-130	8	30	
Isopropylbenzene	4.37	0.18	0.50	ug/l	5.00	87	70-130	7	30	
m,p-Xylene	4.37	0.33	0.50	ug/l	5.00	87	70-130	5	30	
m-Dichlorobenzene	4.82	0.14	0.50	ug/l	5.00	96	70-130	4	30	
Methyl tert-butyl ether (MTBE)	18.9	0.94	2.0	ug/l	20.0	95	70-130	0.3	30	
Methylene chloride	4.00	0.30	0.50	ug/l	5.00	80	70-130	0.03	30	
Naphthalene	4.55	0.35	0.50	ug/l	5.00	91	70-130	7	30	
n-Butylbenzene	4.36	0.29	0.50	ug/l	5.00	87	70-130	9	30	
n-Propylbenzene	3.96	0.18	0.50	ug/l	5.00	79	70-130	10	30	
o-Dichlorobenzene	4.82	0.19	0.50	ug/l	5.00	96	70-130	2	30	
o-Xylene	4.52	0.20	0.50	ug/l	5.00	90	70-130	7	30	
p-Dichlorobenzene	5.08	0.18	0.50	ug/l	5.00	102	70-130	2	30	
p-Isopropyltoluene	4.44	0.25	0.50	ug/l	5.00	89	70-130	5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:15

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2411 - EPA 524.2 (Continued)											
LCS Dup (W4B2411-BSD1)											
					Prepared: 02/29/24 Analyzed: 03/01/24						
sec-Butylbenzene	4.31	0.24	0.50	ug/l	5.00		86	70-130	5	30	
Styrene	4.66	0.19	0.50	ug/l	5.00		93	70-130	3	30	
Tert-amyl methyl ether	19.3	0.59	2.0	ug/l	20.0		96	70-130	0.1	30	
tert-Butylbenzene	4.43	0.18	0.50	ug/l	5.00		89	70-130	6	30	
Tetrachloroethene	5.03	0.18	0.50	ug/l	5.00		101	70-130	10	30	
Toluene	4.56	0.29	0.50	ug/l	5.00		91	70-130	3	30	
trans-1,2-Dichloroethene	4.22	0.26	0.50	ug/l	5.00		84	70-130	3	30	
trans-1,3-Dichloropropene	4.98	0.32	0.50	ug/l	5.00		100	70-130	4	30	
Trichloroethene	4.68	0.18	0.50	ug/l	5.00		94	70-130	3	30	
Trichlorofluoromethane	4.53	0.18	0.50	ug/l	5.00		91	70-130	8	30	
Vinyl chloride	4.02	0.18	0.50	ug/l	5.00		80	70-130	6	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.2			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	45.2			ug/l	50.0		90	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:15

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Assuming source temperature @20C for calculation.
HT1.3	Holding time exceeded. Sample was analyzed past the holding time.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
MS2.0	MS/MSD RPD exceeds control limit. No material impact as both sets of recovery data meet control criteria.
R-02	The RPD was outside of QC acceptance limits due to possible matrix interference.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B20049

Report Date: 3/11/2024

Received Date: 2/17/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/17/24 with the Chain-of-Custody document. The samples were received in good condition, at 14.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Project Manager: Brown & Caldwell

Certificate of Analysis

FINAL REPORT

Reported:
03/11/2024 15:38

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-6-S4	Brown & Caldwell	4B20049-01	Water	02/17/24 12:12	
AT-GS-6-S7	Brown & Caldwell	4B20049-02	Water	02/17/24 12:23	
AT-RES-6-S22	Brown & Caldwell	4B20049-03	Water	02/17/24 11:27	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/11/2024 15:38

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-6-S4

Sampled: 02/17/24 12:12 by Brown & Caldwell

4B20049-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B							
Batch ID: W4C0330	Preparation: _NONE (TOC/TOX)						Analyst: rem
Total Organic Carbon (TOC)	0.56	0.19	0.30	mg/l	1	03/06/24	

Sample Results

Sample: AT-GS-6-S7

Sampled: 02/17/24 12:23 by Brown & Caldwell

4B20049-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B							
Batch ID: W4C0330	Preparation: _NONE (TOC/TOX)						Analyst: rem
Total Organic Carbon (TOC)	0.59	0.19	0.30	mg/l	1	03/06/24	

Sample Results

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:27 by Brown & Caldwell

4B20049-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B							
Batch ID: W4C0330	Preparation: _NONE (TOC/TOX)						Analyst: rem
Total Organic Carbon (TOC)	0.27	0.19	0.30	mg/l	1	03/06/24	J



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/11/2024 15:38

Project Manager: Brown & Caldwell

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0330 - SM 5310B											
Blank (W4C0330-BLK1)											
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							
					Prepared: 03/05/24 Analyzed: 03/06/24						
LCS (W4C0330-BS1)											
Total Organic Carbon (TOC)	0.890	0.19	0.30	mg/l	1.00		89	85-115			
					Prepared: 03/05/24 Analyzed: 03/06/24						
Matrix Spike (W4C0330-MS1)											
Total Organic Carbon (TOC)	39.8	0.19	0.30	mg/l	5.00	14.2	513	76-115			MS-02
					Prepared: 03/05/24 Analyzed: 03/07/24						
Matrix Spike Dup (W4C0330-MSD1)											
Total Organic Carbon (TOC)	36.9	0.19	0.30	mg/l	5.00	14.2	455	76-115	8	20	MS-02
					Prepared: 03/05/24 Analyzed: 03/07/24						

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/11/2024 15:38

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order # **41370049**

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles		PROJECT: Background Water COSM 97-005 - COPCs Quality		ANALYSES REQUESTED				SPECIAL HANDLING	
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018		PHONE: (213) 271-2237 ckindle@BrwnCald.com		EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	53108 TOC	<input type="checkbox"/> Same Day Rush 150% <input type="checkbox"/> 24 Hour Rush 100% <input type="checkbox"/> 48-72 Hour Rush 75% <input type="checkbox"/> 4 - 5 Day Rush 30% <input type="checkbox"/> Rush Extractions 50% <input type="checkbox"/> 10 - 15 Business Days <input type="checkbox"/> QA/QC Data Package
PROJECT MANAGER Chris Kindle		SAMPLER Brown and Caldwell		Invoice to Rose Ford, Rford@BrwnCald.com				Charges will apply for weekends/holidays	

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	EPA 522 1,4-dioxane	EPA 524.2 VOCs	524M 1,2,3-TCP	537.1 PFOA	53108 TOC	COMMENTS
	2/17/24	12:12	sub	AT-GS-6-54	2					✓	
	2/17/24	12:23	sub	AT-GS-6-57	2					✓	
	2/17/24	11:29	sub	AT-RES-6-522	2					✓	

RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 2/17/24 14:42	RECEIVED BY Nilton Alvarez	SAMPLE CONDITION: Actual Temperature: 14.6° Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab T0221	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = O8 OT = Other Matrix
RELINQUISHED BY <i>[Signature]</i>	DATE / TIME 2/17/24 16:00	RECEIVED BY Shahel Moti		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		



Sample Receipt Checklist

Weck WKO: **4B20049**

Date/Time Received: **02/17/24 @ 16:00**

WKO Logged by: **Lester Abad**

of Samples: **02**

Samples Checked by: **Lester Abad**

Delivered by: **Client**

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		14.6°C		
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		WET		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cl Test Strip Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH Reading
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Anti-added

PM Comments

Sample Receipt Checklist Completed by:

Signature: *Lester Abad*

Date: **02/20/24**

Work Orders: 4B20050

Report Date: 3/28/2024

Project: COSM 97-005 - COPCs

Received Date: 2/18/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

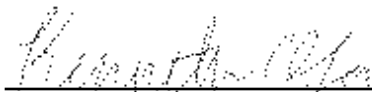
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/18/24 with the Chain-of-Custody document. The samples were received in good condition, at 12.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-7-S4	Brown & Caldwell	4B20050-01	Water	02/18/24 11:30	
AT-GS-7-S7	Brown & Caldwell	4B20050-02	Water	02/18/24 11:30	
AT-GS-7-S8	Brown & Caldwell	4B20050-03	Water	02/18/24 11:40	
AT-UV-7-S10	Brown & Caldwell	4B20050-04	Water	02/18/24 11:05	
AT-GAC-7-S11	Brown & Caldwell	4B20050-05	Water	02/18/24 11:45	
AT-GAC-7-S23	Brown & Caldwell	4B20050-06	Water	02/18/24 11:30	
AT-RO-7-S14	Brown & Caldwell	4B20050-07	Water	02/18/24 10:50	
AT-RO-7-S24	Brown & Caldwell	4B20050-08	Water	02/18/24 10:45	
AT-DEC-7-S18	Brown & Caldwell	4B20050-09	Water	02/18/24 10:30	
AT-DEC-7-S19	Brown & Caldwell	4B20050-10	Water	02/18/24 10:30	
AT-RES-7-S22	Brown & Caldwell	4B20050-11	Water	02/18/24 09:55	
AT-RES-7-S22D	Brown & Caldwell	4B20050-12	Water	02/18/24 09:55	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3			⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP			Instr: GCMS12				
Batch ID: W4B1937		Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM	
1,2,3-Trichloropropane	0.045	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1			Instr: LCMS06				
Batch ID: W4B1968		Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA	
11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	03/02/24	
ADONA	ND	0.47	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/02/24	
PFBS	1.6	0.49	1.7	ng/l	1	03/02/24	J
PFDA	ND	0.38	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.55	1.7	ng/l	1	03/02/24	
PFHpA	0.66	0.45	1.7	ng/l	1	03/02/24	J
PFHxA	2.4	0.41	1.7	ng/l	1	03/02/24	
PFHxS	1.5	0.50	1.7	ng/l	1	03/02/24	J
PFNA	ND	0.44	1.7	ng/l	1	03/02/24	
PFOA	0.68	0.56	1.7	ng/l	1	03/02/24	J
PFOS	ND	0.45	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/02/24	

Surrogate(s)

13C2-PFDA	118%	Conc: 39.8	70-130	03/02/24
13C2-PFHxA	110%	Conc: 37.2	70-130	03/02/24
d5-EtFOSAA	107%	Conc: 145	70-130	03/02/24
HFPO-DA-13C3	101%	Conc: 34.1	70-130	03/02/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	0.71	0.27	0.50	ug/l	1	03/01/24	

4B20050

Page 3 of 70

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1-Dichloroethene	3.6	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	0.83	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	4.6	0.27	0.50	ug/l	1	03/01/24	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	2.0	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4C0004

Preparation: EPA 5030B

Prepared: 03/01/24 07:11

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	1.6	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	4.6		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	48	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	0.25	0.18	0.50	ug/l	1	03/01/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	83%	Conc: 41.5	70-130	03/01/24
4-Bromofluorobenzene	85%	Conc: 42.7	70-130	03/01/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4C0004

Preparation: EPA 5030B

Prepared: 03/01/24 07:11

Analyst: ADM
(Continued)

Sample Results

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1944

Preparation: EPA 522/SPE

Prepared: 02/27/24 08:30

Analyst: mld

1,4-Dioxane	53	0.56	1.4	ug/l	20	02/29/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	94%	Conc: 9.25	70-130			02/29/24	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.20	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	98%	Conc: 9.71	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1937	Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968	Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	03/02/24	
ADONA	ND	0.48	1.7	ng/l	1	03/02/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/02/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/02/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/02/24	
PFBS	ND	0.50	1.7	ng/l	1	03/02/24	
PFDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/02/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/02/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/02/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/02/24	
PFNA	ND	0.45	1.7	ng/l	1	03/02/24	
PFOA	ND	0.57	1.7	ng/l	1	03/02/24	
PFOS	ND	0.46	1.7	ng/l	1	03/02/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/02/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/02/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/02/24	
<i>Surrogate(s)</i>							
13C2-PFDA	122%	Conc: 41.9	70-130			03/02/24	
13C2-PFHxA	104%	Conc: 35.7	70-130			03/02/24	
d5-EtFOSAA	107%	Conc: 147	70-130			03/02/24	
HFPO-DA-13C3	93%	Conc: 32.0	70-130			03/02/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Page 7 of 70

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/01/24	
1,1-Dichloroethene	1.4	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	0.60	0.24	0.50	ug/l	1	03/01/24	
Bromoform	14	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	0.49	0.27	0.50	ug/l	1	03/01/24	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	2.8	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	0.90	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	17		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	14	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B			Prepared: 03/01/24 07:11		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 42.0	70-130			03/01/24	
4-Bromofluorobenzene	87%	Conc: 43.3	70-130			03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S8

Sampled: 02/18/24 11:40 by Brown & Caldwell

4B20050-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1937		Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM	
1,2,3-Trichloropropane	0.044	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B1968		Preparation: EPA 537/SPE		Prepared: 02/23/24 10:04		Analyst: JNA	
11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	03/02/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	03/02/24	
ADONA	ND	0.49	1.8	ng/l	1	03/02/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	03/02/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	03/02/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/02/24	
PFBS	1.6	0.51	1.8	ng/l	1	03/02/24	J
PFDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/02/24	
PFHpA	0.66	0.47	1.8	ng/l	1	03/02/24	J
PFHxA	2.3	0.43	1.8	ng/l	1	03/02/24	
PFHxS	1.6	0.52	1.8	ng/l	1	03/02/24	J
PFNA	ND	0.46	1.8	ng/l	1	03/02/24	
PFOA	0.66	0.59	1.8	ng/l	1	03/02/24	J
PFOS	ND	0.47	1.8	ng/l	1	03/02/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/02/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/02/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/02/24	

Surrogate(s)

13C2-PFDA	120%	Conc: 42.4	70-130	03/02/24
13C2-PFHxA	108%	Conc: 38.0	70-130	03/02/24
d5-EtFOSAA	103%	Conc: 145	70-130	03/02/24
HFPO-DA-13C3	101%	Conc: 35.4	70-130	03/02/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/01/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/01/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/01/24	
1,1-Dichloroethane	0.70	0.27	0.50	ug/l	1	03/01/24	

4B20050

Page 11 of 70

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S8

Sampled: 02/18/24 11:40 by Brown & Caldwell

4B20050-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1-Dichloroethene	3.5	0.16	0.50	ug/l	1	03/01/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/01/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/01/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/01/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/01/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/01/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/01/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/01/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/01/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/01/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/01/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/01/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/01/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/01/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/01/24	
Acetone	ND	3.1	5.0	ug/l	1	03/01/24	
Benzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/01/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/01/24	
Bromoform	2.0	0.38	0.50	ug/l	1	03/01/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/01/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/01/24	
Carbon tetrachloride	0.85	0.27	0.50	ug/l	1	03/01/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/01/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/01/24	
Chloroform	4.6	0.27	0.50	ug/l	1	03/01/24	
Chloromethane	ND	0.23	0.50	ug/l	1	03/01/24	
cis-1,2-Dichloroethene	2.0	0.25	0.50	ug/l	1	03/01/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/01/24	
Dibromochloromethane	0.80	0.20	0.50	ug/l	1	03/01/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S8

Sampled: 02/18/24 11:40 by Brown & Caldwell

4B20050-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4C0004

Preparation: EPA 5030B

Prepared: 03/01/24 07:11

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/01/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/01/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/01/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/01/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/01/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/01/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/01/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/01/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/01/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/01/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/01/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/01/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/01/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/01/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/01/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/01/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/01/24	
Styrene	ND	0.19	0.50	ug/l	1	03/01/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/01/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/01/24	
Tetrachloroethene	1.5	0.18	0.50	ug/l	1	03/01/24	
THMs, Total	7.4		0.50	ug/l	1	03/01/24	
Toluene	ND	0.29	0.50	ug/l	1	03/01/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/01/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/01/24	
Trichloroethene	48	0.18	0.50	ug/l	1	03/01/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	03/01/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/01/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/01/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	84%	Conc: 42.1	70-130	03/01/24
4-Bromofluorobenzene	86%	Conc: 43.1	70-130	03/01/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S8

Sampled: 02/18/24 11:40 by Brown & Caldwell

4B20050-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4C0004

Preparation: EPA 5030B

Prepared: 03/01/24 07:11

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-7-S8

Sampled: 02/18/24 11:40 by Brown & Caldwell

4B20050-03RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1944

Preparation: EPA 522/SPE

Prepared: 02/27/24 08:30

Analyst: mld

1,4-Dioxane	50	0.56	1.4	ug/l	20	02/29/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	94%	Conc: 9.26	70-130			02/29/24	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-7-S10

Sampled: 02/18/24 11:05 by Brown & Caldwell

4B20050-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.029	0.028	0.070	ug/l	1	02/28/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 9.10	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1937	Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM		
1,2,3-Trichloropropane	0.020	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11Cl-PF3OUdS	ND	0.50	1.8	ng/l	1	03/12/24	
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	03/12/24	
ADONA	ND	0.49	1.8	ng/l	1	03/12/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	03/12/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	03/12/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/12/24	
PFBS	1.9	0.51	1.8	ng/l	1	03/12/24	
PFDA	ND	0.40	1.8	ng/l	1	03/12/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/12/24	
PFHpA	0.68	0.47	1.8	ng/l	1	03/12/24	J
PFHxA	2.5	0.43	1.8	ng/l	1	03/12/24	
PFHxS	1.7	0.52	1.8	ng/l	1	03/12/24	J
PFNA	ND	0.46	1.8	ng/l	1	03/12/24	
PFOA	0.76	0.59	1.8	ng/l	1	03/12/24	J
PFOS	ND	0.47	1.8	ng/l	1	03/12/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/12/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/12/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 39.5	70-130			03/12/24	
13C2-PFHxA	112%	Conc: 39.6	70-130			03/12/24	
d5-EtFOSAA	110%	Conc: 156	70-130			03/12/24	
HFPO-DA-13C3	97%	Conc: 34.3	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Page 15 of 70

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-7-S10

Sampled: 02/18/24 11:05 by Brown & Caldwell

4B20050-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	0.35	0.27	0.50	ug/l	1	03/02/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	0.81	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	3.9	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-7-S10

Sampled: 02/18/24 11:05 by Brown & Caldwell

4B20050-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	3.9		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	03/02/24	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-UV-7-S10

Sampled: 02/18/24 11:05 by Brown & Caldwell

4B20050-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B			Prepared: 03/01/24 07:11		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 40.9	70-130			03/02/24	
4-Bromofluorobenzene	86%	Conc: 42.8	70-130			03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-S11

Sampled: 02/18/24 11:45 by Brown & Caldwell

4B20050-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.64	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	89%	Conc: 8.79	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1937	Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	03/12/24	
ADONA	ND	0.48	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.42	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.76	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/12/24	
PFBS	ND	0.50	1.7	ng/l	1	03/12/24	
PFDA	ND	0.40	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.57	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.47	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.43	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.52	1.7	ng/l	1	03/12/24	
PFNA	ND	0.45	1.7	ng/l	1	03/12/24	
PFOA	ND	0.58	1.7	ng/l	1	03/12/24	
PFOS	ND	0.46	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.40	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.42	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	113%	Conc: 39.6	70-130			03/12/24	
13C2-PFHxA	112%	Conc: 39.1	70-130			03/12/24	
d5-EtFOSAA	109%	Conc: 153	70-130			03/12/24	
HFPO-DA-13C3	102%	Conc: 35.8	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-S11

Sampled: 02/18/24 11:45 by Brown & Caldwell

4B20050-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-S11

Sampled: 02/18/24 11:45 by Brown & Caldwell

4B20050-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	ND		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-S11

Sampled: 02/18/24 11:45 by Brown & Caldwell

4B20050-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B			Prepared: 03/01/24 07:11		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.7	70-130			03/02/24	
4-Bromofluorobenzene	86%	Conc: 42.9	70-130			03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-S23

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.039	0.028	0.070	ug/l	1	02/28/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	90%	Conc: 9.38	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1937	Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM		
1,2,3-Trichloropropane	0.011	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.49	1.8	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	03/12/24	
ADONA	ND	0.49	1.8	ng/l	1	03/12/24	
EtFOSAA	ND	0.42	1.8	ng/l	1	03/12/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	03/12/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/12/24	
PFBS	1.3	0.51	1.8	ng/l	1	03/12/24	J
PFDA	ND	0.40	1.8	ng/l	1	03/12/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/12/24	
PFHpA	0.50	0.47	1.8	ng/l	1	03/12/24	J
PFHxA	1.7	0.43	1.8	ng/l	1	03/12/24	J
PFHxS	1.2	0.52	1.8	ng/l	1	03/12/24	J
PFNA	ND	0.46	1.8	ng/l	1	03/12/24	
PFOA	ND	0.59	1.8	ng/l	1	03/12/24	
PFOS	ND	0.47	1.8	ng/l	1	03/12/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/12/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/12/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 39.5	70-130			03/12/24	
13C2-PFHxA	112%	Conc: 39.3	70-130			03/12/24	
d5-EtFOSAA	112%	Conc: 158	70-130			03/12/24	
HFPO-DA-13C3	101%	Conc: 35.4	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Page 23 of 70

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-S23

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	1.3	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-S23

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	0.46	0.21	0.50	ug/l	1	03/02/24	J
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	0.48	0.33	0.50	ug/l	1	03/02/24	J
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	0.57	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	1.3		0.50	ug/l	1	03/02/24	
Toluene	0.41	0.29	0.50	ug/l	1	03/02/24	J
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-S23

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20050-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B			Prepared: 03/01/24 07:11		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	0.57	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.6	70-130			03/02/24	
4-Bromofluorobenzene	86%	Conc: 42.8	70-130			03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-7-S14

Sampled: 02/18/24 10:50 by Brown & Caldwell

4B20050-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.43	0.028	0.070	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	102%	Conc: 10.0	70-130			02/28/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1937	Preparation: EPA 5030B		Prepared: 02/23/24 07:56		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	03/12/24	
ADONA	ND	0.47	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.74	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/12/24	
PFBS	ND	0.49	1.7	ng/l	1	03/12/24	
PFDA	ND	0.39	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/12/24	
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	ND	0.57	1.7	ng/l	1	03/12/24	
PFOS	ND	0.45	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	116%	Conc: 39.6	70-130			03/12/24	
13C2-PFHxA	112%	Conc: 38.4	70-130			03/12/24	
d5-EtFOSAA	109%	Conc: 149	70-130			03/12/24	
HFPO-DA-13C3	105%	Conc: 35.7	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Page 27 of 70

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-7-S14

Sampled: 02/18/24 10:50 by Brown & Caldwell

4B20050-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	0.46	0.16	0.50	ug/l	1	03/02/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	0.27	0.24	0.50	ug/l	1	03/02/24	J
Bromoform	7.3	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-7-S14

Sampled: 02/18/24 10:50 by Brown & Caldwell

4B20050-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	1.4	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	0.36	0.18	0.50	ug/l	1	03/02/24	J
THMs, Total	8.7		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	5.7	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-7-S14

Sampled: 02/18/24 10:50 by Brown & Caldwell

4B20050-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.6	70-130			03/02/24	
4-Bromofluorobenzene	86%	Conc: 43.1	70-130			03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-7-S24

Sampled: 02/18/24 10:45 by Brown & Caldwell

4B20050-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.042	0.028	0.070	ug/l	1	02/29/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 9.00	70-130			02/29/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938	Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/24/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11Cl-PF3OUdS	ND	0.48	1.7	ng/l	1	03/12/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	03/12/24	
ADONA	ND	0.47	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.74	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/12/24	
PFBS	ND	0.49	1.7	ng/l	1	03/12/24	
PFDA	ND	0.39	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/12/24	
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	ND	0.57	1.7	ng/l	1	03/12/24	
PFOS	ND	0.45	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 38.3	70-130			03/12/24	
13C2-PFHxA	109%	Conc: 37.3	70-130			03/12/24	
d5-EtFOSAA	101%	Conc: 138	70-130			03/12/24	
HFPO-DA-13C3	80%	Conc: 27.2	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Page 31 of 70

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-7-S24

Sampled: 02/18/24 10:45 by Brown & Caldwell

4B20050-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	0.31	0.16	0.50	ug/l	1	03/02/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	12	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	5.4	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-7-S24

Sampled: 02/18/24 10:45 by Brown & Caldwell

4B20050-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B		Prepared: 03/01/24 07:11		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	1.1	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	6.5		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	3.3	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-7-S24

Sampled: 02/18/24 10:45 by Brown & Caldwell

4B20050-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0004		Preparation: EPA 5030B			Prepared: 03/01/24 07:11		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.3	70-130			03/02/24	
4-Bromofluorobenzene	85%	Conc: 42.7	70-130			03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-7-S18

Sampled: 02/18/24 10:30 by Brown & Caldwell

4B20050-09 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.11	0.028	0.070	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 9.51	70-130			02/29/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938	Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/25/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11Cl-PF3OUdS	ND	0.48	1.7	ng/l	1	03/12/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	03/12/24	
ADONA	ND	0.47	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.74	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/12/24	
PFBS	ND	0.49	1.7	ng/l	1	03/12/24	
PFDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.45	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.41	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.50	1.7	ng/l	1	03/12/24	
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	ND	0.57	1.7	ng/l	1	03/12/24	
PFOS	ND	0.45	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	110%	Conc: 37.3	70-130			03/12/24	
13C2-PFHxA	111%	Conc: 37.7	70-130			03/12/24	
d5-EtFOSAA	110%	Conc: 149	70-130			03/12/24	
HFPO-DA-13C3	105%	Conc: 35.7	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-7-S18

Sampled: 02/18/24 10:30 by Brown & Caldwell

4B20050-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	0.37	0.16	0.50	ug/l	1	03/02/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	6.1	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-7-S18

Sampled: 02/18/24 10:30 by Brown & Caldwell

4B20050-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	1.2	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	0.18	0.18	0.50	ug/l	1	03/02/24	J
THMs, Total	7.3		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	4.0	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-DEC-7-S18

Sampled: 02/18/24 10:30 by Brown & Caldwell

4B20050-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	86%	Conc: 43.1	70-130			03/02/24	
4-Bromofluorobenzene	88%	Conc: 43.9	70-130			03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-7-S19

Sampled: 02/18/24 10:30 by Brown & Caldwell

4B20050-10 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.12	0.028	0.070	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 8.79	70-130			02/29/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938	Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/25/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.46	1.6	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.43	1.6	ng/l	1	03/12/24	
ADONA	ND	0.45	1.6	ng/l	1	03/12/24	
EtFOSAA	ND	0.39	1.6	ng/l	1	03/12/24	
HFPO-DA	ND	0.71	1.6	ng/l	1	03/12/24	
MeFOSAA	ND	0.47	1.6	ng/l	1	03/12/24	
PFBS	ND	0.47	1.6	ng/l	1	03/12/24	
PFDA	ND	0.37	1.6	ng/l	1	03/12/24	
PFDoA	ND	0.54	1.6	ng/l	1	03/12/24	
PFHpA	ND	0.44	1.6	ng/l	1	03/12/24	
PFHxA	ND	0.40	1.6	ng/l	1	03/12/24	
PFHxS	ND	0.48	1.6	ng/l	1	03/12/24	
PFNA	ND	0.42	1.6	ng/l	1	03/12/24	
PFOA	ND	0.54	1.6	ng/l	1	03/12/24	
PFOS	ND	0.43	1.6	ng/l	1	03/12/24	
PFTeDA	ND	0.37	1.6	ng/l	1	03/12/24	
PFTTrDA	ND	0.34	1.6	ng/l	1	03/12/24	
PFUnA	ND	0.39	1.6	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 36.5	70-130			03/12/24	
13C2-PFHxA	108%	Conc: 35.2	70-130			03/12/24	
d5-EtFOSAA	104%	Conc: 136	70-130			03/12/24	
HFPO-DA-13C3	85%	Conc: 27.6	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Page 39 of 70

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-7-S19

Sampled: 02/18/24 10:30 by Brown & Caldwell

4B20050-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	2.6	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-7-S19

Sampled: 02/18/24 10:30 by Brown & Caldwell

4B20050-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	0.32	0.20	0.50	ug/l	1	03/02/24	J
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	2.6		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-7-S19

Sampled: 02/18/24 10:30 by Brown & Caldwell

4B20050-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 42.2	70-130			03/02/24	
4-Bromofluorobenzene	87%	Conc: 43.3	70-130			03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20050-11 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.11	0.028	0.070	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	94%	Conc: 9.37	70-130			02/29/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938	Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/25/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4C0710	Preparation: EPA 537/SPE		Prepared: 03/08/24 14:36		Analyst: ajc		
11Cl-PF3OUdS	ND	0.50	1.8	ng/l	1	03/13/24	O-05
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	03/13/24	O-05
ADONA	ND	0.49	1.8	ng/l	1	03/13/24	O-05
EtFOSAA	ND	0.43	1.8	ng/l	1	03/13/24	O-05
HFPO-DA	ND	0.78	1.8	ng/l	1	03/13/24	O-05
MeFOSAA	ND	0.52	1.8	ng/l	1	03/13/24	O-05
PFBS	ND	0.52	1.8	ng/l	1	03/13/24	O-05
PFDA	ND	0.41	1.8	ng/l	1	03/13/24	O-05
PFDoA	ND	0.59	1.8	ng/l	1	03/13/24	O-05
PFHpA	ND	0.48	1.8	ng/l	1	03/13/24	O-05
PFHxA	ND	0.44	1.8	ng/l	1	03/13/24	O-05
PFHxS	ND	0.53	1.8	ng/l	1	03/13/24	O-05
PFNA	ND	0.47	1.8	ng/l	1	03/13/24	O-05
PFOA	ND	0.60	1.8	ng/l	1	03/13/24	O-05
PFOS	ND	0.48	1.8	ng/l	1	03/13/24	O-05
PFTeDA	ND	0.41	1.8	ng/l	1	03/13/24	O-05
PFTTrDA	ND	0.37	1.8	ng/l	1	03/13/24	O-05
PFUnA	ND	0.43	1.8	ng/l	1	03/13/24	O-05
<i>Surrogate(s)</i>							
13C2-PFDA	110%	Conc: 39.5	70-130			03/13/24	
13C2-PFHxA	109%	Conc: 39.0	70-130			03/13/24	
d5-EtFOSAA	104%	Conc: 149	70-130			03/13/24	
HFPO-DA-13C3	105%	Conc: 37.6	70-130			03/13/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Page 43 of 70

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20050-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	2.7	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20050-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	0.34	0.20	0.50	ug/l	1	03/02/24	J
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	2.7		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20050-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B			Prepared: 03/01/24 07:12		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 41.9	70-130			03/02/24	
4-Bromofluorobenzene	86%	Conc: 43.2	70-130			03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20050-12 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.12	0.028	0.070	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 8.78	70-130			02/29/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938	Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/25/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4C0710	Preparation: EPA 537/SPE		Prepared: 03/08/24 14:36		Analyst: ajc		
11Cl-PF3OUdS	ND	0.49	1.8	ng/l	1	03/13/24	O-05
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	03/13/24	O-05
ADONA	ND	0.49	1.8	ng/l	1	03/13/24	O-05
EtFOSAA	ND	0.42	1.8	ng/l	1	03/13/24	O-05
HFPO-DA	ND	0.77	1.8	ng/l	1	03/13/24	O-05
MeFOSAA	ND	0.51	1.8	ng/l	1	03/13/24	O-05
PFBS	ND	0.51	1.8	ng/l	1	03/13/24	O-05
PFDA	ND	0.40	1.8	ng/l	1	03/13/24	O-05
PFDoA	ND	0.58	1.8	ng/l	1	03/13/24	O-05
PFHpA	ND	0.47	1.8	ng/l	1	03/13/24	O-05
PFHxA	ND	0.43	1.8	ng/l	1	03/13/24	O-05
PFHxS	ND	0.52	1.8	ng/l	1	03/13/24	O-05
PFNA	ND	0.46	1.8	ng/l	1	03/13/24	O-05
PFOA	ND	0.59	1.8	ng/l	1	03/13/24	O-05
PFOS	ND	0.47	1.8	ng/l	1	03/13/24	O-05
PFTeDA	ND	0.40	1.8	ng/l	1	03/13/24	O-05
PFTTrDA	ND	0.37	1.8	ng/l	1	03/13/24	O-05
PFUnA	ND	0.42	1.8	ng/l	1	03/13/24	O-05
<i>Surrogate(s)</i>							
13C2-PFDA	107%	Conc: 37.5	70-130			03/13/24	
13C2-PFHxA	82%	Conc: 28.8	70-130			03/13/24	
d5-EtFOSAA	97%	Conc: 136	70-130			03/13/24	
HFPO-DA-13C3	78%	Conc: 27.6	70-130			03/13/24	

Volatile Organic Compounds by P&T and GC/MS

4B20050

Page 47 of 70

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20050-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	2.5	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20050-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	0.34	0.20	0.50	ug/l	1	03/02/24	J
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	2.5		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20050-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B			Prepared: 03/01/24 07:12		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	84%	Conc: 41.8	70-130			03/02/24	
4-Bromofluorobenzene	85%	Conc: 42.5	70-130			03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1944 - EPA 522											
Blank (W4B1944-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.21			ug/l	10.0		92	70-130			
LCS (W4B1944-BS1)											
1,4-Dioxane	0.0515	0.028	0.070	ug/l	0.0600		86	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.39			ug/l	10.0		94	70-130			
LCS Dup (W4B1944-BSD1)											
1,4-Dioxane	0.0600	0.028	0.070	ug/l	0.0600		100	50-150	15	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.73			ug/l	10.0		97	70-130			

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1937 - SRL 524M-TCP											
Blank (W4B1937-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W4B1937-BS1)											
1,2,3-Trichloropropane	0.0196	0.0012	0.0050	ug/l	0.0200		98	80-120			
LCS Dup (W4B1937-BSD1)											
1,2,3-Trichloropropane	0.0216	0.0012	0.0050	ug/l	0.0200		108	80-120	10	20	
Duplicate (W4B1937-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
Batch: W4B1938 - SRL 524M-TCP											
Blank (W4B1938-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W4B1938-BS1)											
1,2,3-Trichloropropane	0.0218	0.0012	0.0050	ug/l	0.0200		109	80-120			
LCS Dup (W4B1938-BSD1)											
1,2,3-Trichloropropane	0.0217	0.0012	0.0050	ug/l	0.0200		109	80-120	0.4	20	
Duplicate (W4B1938-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B1968 - EPA 537.1									
Blank (W4B1968-BLK1)					Prepared: 02/23/24 Analyzed: 03/02/24				
11CI-PF3OUdS	ND	0.56	2.0	ng/l					
9CI-PF3ONS	ND	0.53	2.0	ng/l					
ADONA	ND	0.55	2.0	ng/l					
EtFOSAA	ND	0.48	2.0	ng/l					
HFPO-DA	ND	0.87	2.0	ng/l					
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	49.4			ng/l	40.0		124 70-130		
13C2-PFHxA	46.2			ng/l	40.0		116 70-130		
d5-EtFOSAA	180			ng/l	160		112 70-130		
HFPO-DA-13C3	41.5			ng/l	40.0		104 70-130		
LCS (W4B1968-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24				
11CI-PF3OUdS	17.4	0.56	2.0	ng/l	20.0		87 70-130		
9CI-PF3ONS	17.3	0.53	2.0	ng/l	20.0		87 70-130		
ADONA	19.2	0.55	2.0	ng/l	20.0		96 70-130		
EtFOSAA	18.6	0.48	2.0	ng/l	20.0		93 70-130		
HFPO-DA	18.5	0.87	2.0	ng/l	20.0		93 70-130		
MeFOSAA	18.9	0.58	2.0	ng/l	20.0		95 70-130		
PFBS	19.7	0.58	2.0	ng/l	20.0		98 70-130		
PFDA	18.4	0.45	2.0	ng/l	20.0		92 70-130		
PFDoA	18.7	0.66	2.0	ng/l	20.0		94 70-130		
PFHpA	19.9	0.53	2.0	ng/l	20.0		100 70-130		
PFHxA	19.5	0.49	2.0	ng/l	20.0		97 70-130		
PFHxS	19.3	0.59	2.0	ng/l	20.0		97 70-130		
PFNA	19.5	0.52	2.0	ng/l	20.0		98 70-130		
PFOA	20.0	0.67	2.0	ng/l	20.0		100 70-130		
PFOS	18.6	0.53	2.0	ng/l	20.0		93 70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1968 - EPA 537.1 (Continued)										
LCS (W4B1968-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24					
PFTeDA	18.0	0.45	2.0	ng/l	20.0		90 70-130			
PFTTrDA	18.2	0.42	2.0	ng/l	20.0		91 70-130			
PFUnA	18.9	0.48	2.0	ng/l	20.0		94 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	48.5			ng/l	40.0		121 70-130			
13C2-PFHxA	46.0			ng/l	40.0		115 70-130			
d5-EtFOSAA	180			ng/l	160		112 70-130			
HFPO-DA-13C3	43.7			ng/l	40.0		109 70-130			
LCS Dup (W4B1968-BS1)					Prepared: 02/23/24 Analyzed: 03/02/24					
11CI-PF3OUdS	17.8	0.56	2.0	ng/l	20.0		89 70-130	2	30	
9CI-PF3ONS	18.0	0.53	2.0	ng/l	20.0		90 70-130	4	30	
ADONA	19.9	0.55	2.0	ng/l	20.0		99 70-130	3	30	
EtFOSAA	18.2	0.48	2.0	ng/l	20.0		91 70-130	3	30	
HFPO-DA	18.7	0.87	2.0	ng/l	20.0		93 70-130	0.9	30	
MeFOSAA	18.9	0.58	2.0	ng/l	20.0		94 70-130	0.3	30	
PFBS	19.7	0.58	2.0	ng/l	20.0		99 70-130	0.3	30	
PFDA	18.3	0.45	2.0	ng/l	20.0		91 70-130	0.9	30	
PFDoA	19.3	0.66	2.0	ng/l	20.0		96 70-130	3	30	
PFHpA	20.4	0.53	2.0	ng/l	20.0		102 70-130	2	30	
PFHxA	19.9	0.49	2.0	ng/l	20.0		100 70-130	2	30	
PFHxS	19.7	0.59	2.0	ng/l	20.0		98 70-130	2	30	
PFNA	20.2	0.52	2.0	ng/l	20.0		101 70-130	4	30	
PFOA	20.2	0.67	2.0	ng/l	20.0		101 70-130	0.8	30	
PFOS	19.1	0.53	2.0	ng/l	20.0		95 70-130	2	30	
PFTeDA	17.6	0.45	2.0	ng/l	20.0		88 70-130	2	30	
PFTTrDA	18.2	0.42	2.0	ng/l	20.0		91 70-130	0.07	30	
PFUnA	19.3	0.48	2.0	ng/l	20.0		97 70-130	2	30	
<i>Surrogate(s)</i>										
13C2-PFDA	48.5			ng/l	40.0		121 70-130			
13C2-PFHxA	47.6			ng/l	40.0		119 70-130			
d5-EtFOSAA	175			ng/l	160		110 70-130			
HFPO-DA-13C3	45.2			ng/l	40.0		113 70-130			
Batch: W4B2487 - EPA 537.1										
Blank (W4B2487-BLK1)					Prepared: 02/29/24 Analyzed: 03/12/24					
11CI-PF3OUdS	ND	0.56	2.0	ng/l						
9CI-PF3ONS	ND	0.53	2.0	ng/l						
ADONA	ND	0.55	2.0	ng/l						
EtFOSAA	ND	0.48	2.0	ng/l						
HFPO-DA	ND	0.87	2.0	ng/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2487 - EPA 537.1 (Continued)									
Blank (W4B2487-BLK1)					Prepared: 02/29/24 Analyzed: 03/12/24				
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	46.4			ng/l	40.0		116 70-130		
13C2-PFHxA	46.1			ng/l	40.0		115 70-130		
d5-EtFOSAA	177			ng/l	160		110 70-130		
HFPO-DA-13C3	39.7			ng/l	40.0		99 70-130		
LCS (W4B2487-BS1)					Prepared: 02/29/24 Analyzed: 03/12/24				
11Cl-PF3OUdS	2.01	0.56	2.0	ng/l	2.00		101 50-150		
9Cl-PF3ONS	2.11	0.53	2.0	ng/l	2.00		105 50-150		
ADONA	2.07	0.55	2.0	ng/l	2.00		104 50-150		
EtFOSAA	2.27	0.48	2.0	ng/l	2.00		114 50-150		
HFPO-DA	1.81	0.87	2.0	ng/l	2.00		91 50-150		J
MeFOSAA	1.92	0.58	2.0	ng/l	2.00		96 50-150		J
PFBS	2.21	0.58	2.0	ng/l	2.00		110 50-150		
PFDA	2.07	0.45	2.0	ng/l	2.00		104 50-150		
PFDoA	1.91	0.66	2.0	ng/l	2.00		96 50-150		J
PFHpA	2.17	0.53	2.0	ng/l	2.00		109 50-150		
PFHxA	2.11	0.49	2.0	ng/l	2.00		105 50-150		
PFHxS	2.29	0.59	2.0	ng/l	2.00		115 50-150		
PFNA	2.10	0.52	2.0	ng/l	2.00		105 50-150		
PFOA	2.16	0.67	2.0	ng/l	2.00		108 50-150		
PFOS	2.18	0.53	2.0	ng/l	2.00		109 50-150		
PFTeDA	2.76	0.45	2.0	ng/l	2.00		138 50-150		
PFTrDA	1.89	0.42	2.0	ng/l	2.00		94 50-150		J
PFUnA	1.96	0.48	2.0	ng/l	2.00		98 50-150		J
<i>Surrogate(s)</i>									
13C2-PFDA	43.2			ng/l	40.0		108 70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2487 - EPA 537.1 (Continued)											
LCS (W4B2487-BS1)						Prepared: 02/29/24 Analyzed: 03/12/24					
<i>Surrogate(s)</i>											
13C2-PFHxA	43.3			ng/l	40.0		108	70-130			
d5-EtFOSAA	166			ng/l	160		104	70-130			
HFPO-DA-13C3	38.0			ng/l	40.0		95	70-130			
LCS Dup (W4B2487-BSD1)						Prepared: 02/29/24 Analyzed: 03/12/24					
11Cl-PF3OUdS	2.01	0.56	2.0	ng/l	2.00		100	50-150	0.4	30	
9Cl-PF3ONS	2.07	0.53	2.0	ng/l	2.00		104	50-150	2	30	
ADONA	2.15	0.55	2.0	ng/l	2.00		108	50-150	4	30	
EtFOSAA	2.02	0.48	2.0	ng/l	2.00		101	50-150	12	30	
HFPO-DA	1.47	0.87	2.0	ng/l	2.00		74	50-150	21	30	J
MeFOSAA	2.25	0.58	2.0	ng/l	2.00		113	50-150	16	30	
PFBS	2.26	0.58	2.0	ng/l	2.00		113	50-150	2	30	
PFDA	2.13	0.45	2.0	ng/l	2.00		107	50-150	3	30	
PFDoA	2.07	0.66	2.0	ng/l	2.00		103	50-150	8	30	
PFHpA	2.24	0.53	2.0	ng/l	2.00		112	50-150	3	30	
PFHxA	2.25	0.49	2.0	ng/l	2.00		112	50-150	7	30	
PFHxS	2.33	0.59	2.0	ng/l	2.00		117	50-150	2	30	
PFNA	2.27	0.52	2.0	ng/l	2.00		114	50-150	8	30	
PFOA	2.29	0.67	2.0	ng/l	2.00		114	50-150	6	30	
PFOS	2.27	0.53	2.0	ng/l	2.00		113	50-150	4	30	
PFTeDA	2.59	0.45	2.0	ng/l	2.00		130	50-150	6	30	
PFTrDA	2.02	0.42	2.0	ng/l	2.00		101	50-150	7	30	
PFUnA	2.17	0.48	2.0	ng/l	2.00		108	50-150	10	30	
<i>Surrogate(s)</i>											
13C2-PFDA	44.9			ng/l	40.0		112	70-130			
13C2-PFHxA	44.8			ng/l	40.0		112	70-130			
d5-EtFOSAA	171			ng/l	160		107	70-130			
HFPO-DA-13C3	31.6			ng/l	40.0		79	70-130			
Batch: W4C0710 - EPA 537.1											
Blank (W4C0710-BLK1)						Prepared: 03/08/24 Analyzed: 03/13/24					
11Cl-PF3OUdS	ND	0.56	2.0	ng/l							
9Cl-PF3ONS	ND	0.53	2.0	ng/l							
ADONA	ND	0.55	2.0	ng/l							
EtFOSAA	ND	0.48	2.0	ng/l							
HFPO-DA	ND	0.87	2.0	ng/l							
MeFOSAA	ND	0.58	2.0	ng/l							
PFBS	ND	0.58	2.0	ng/l							
PFDA	ND	0.45	2.0	ng/l							
PFDoA	ND	0.66	2.0	ng/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4C0710 - EPA 537.1 (Continued)									
Blank (W4C0710-BLK1)					Prepared: 03/08/24 Analyzed: 03/13/24				
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	43.4			ng/l	40.0		108 70-130		
13C2-PFHxA	45.0			ng/l	40.0		113 70-130		
d5-EtFOSAA	161			ng/l	160		101 70-130		
HFPO-DA-13C3	42.9			ng/l	40.0		107 70-130		
LCS (W4C0710-BS1)					Prepared: 03/08/24 Analyzed: 03/13/24				
11Cl-PF3OUdS	77.3	0.56	2.0	ng/l	80.0		97 70-130		
9Cl-PF3ONS	77.9	0.53	2.0	ng/l	80.0		97 70-130		
ADONA	81.9	0.55	2.0	ng/l	80.0		102 70-130		
EtFOSAA	78.4	0.48	2.0	ng/l	80.0		98 70-130		
HFPO-DA	79.5	0.87	2.0	ng/l	80.0		99 70-130		
MeFOSAA	79.0	0.58	2.0	ng/l	80.0		99 70-130		
PFBS	80.1	0.58	2.0	ng/l	80.0		100 70-130		
PFDA	80.2	0.45	2.0	ng/l	80.0		100 70-130		
PFDoA	78.6	0.66	2.0	ng/l	80.0		98 70-130		
PFHpA	83.9	0.53	2.0	ng/l	80.0		105 70-130		
PFHxA	81.8	0.49	2.0	ng/l	80.0		102 70-130		
PFHxS	80.8	0.59	2.0	ng/l	80.0		101 70-130		
PFNA	83.2	0.52	2.0	ng/l	80.0		104 70-130		
PFOA	81.5	0.67	2.0	ng/l	80.0		102 70-130		
PFOS	80.3	0.53	2.0	ng/l	80.0		100 70-130		
PFTeDA	73.8	0.45	2.0	ng/l	80.0		92 70-130		
PFTrDA	78.3	0.42	2.0	ng/l	80.0		98 70-130		
PFUnA	80.6	0.48	2.0	ng/l	80.0		101 70-130		
<i>Surrogate(s)</i>									
13C2-PFDA	46.0			ng/l	40.0		115 70-130		
13C2-PFHxA	44.8			ng/l	40.0		112 70-130		
d5-EtFOSAA	163			ng/l	160		102 70-130		
HFPO-DA-13C3	43.9			ng/l	40.0		110 70-130		
LCS Dup (W4C0710-BSD1)					Prepared: 03/08/24 Analyzed: 03/13/24				

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4C0710 - EPA 537.1 (Continued)											
LCS Dup (W4C0710-BSD1)						Prepared: 03/08/24 Analyzed: 03/13/24					
11CI-PF3OUdS	78.9	0.56	2.0	ng/l	80.0	99	70-130	2	30		
9CI-PF3ONS	80.0	0.53	2.0	ng/l	80.0	100	70-130	3	30		
ADONA	81.7	0.55	2.0	ng/l	80.0	102	70-130	0.2	30		
EtFOSAA	79.2	0.48	2.0	ng/l	80.0	99	70-130	1	30		
HFPO-DA	78.7	0.87	2.0	ng/l	80.0	98	70-130	1	30		
MeFOSAA	78.3	0.58	2.0	ng/l	80.0	98	70-130	0.9	30		
PFBS	83.8	0.58	2.0	ng/l	80.0	105	70-130	4	30		
PFDA	78.6	0.45	2.0	ng/l	80.0	98	70-130	2	30		
PFDoA	77.5	0.66	2.0	ng/l	80.0	97	70-130	1	30		
PFHpA	83.4	0.53	2.0	ng/l	80.0	104	70-130	0.6	30		
PFHxA	80.9	0.49	2.0	ng/l	80.0	101	70-130	1	30		
PFHxS	84.3	0.59	2.0	ng/l	80.0	105	70-130	4	30		
PFNA	80.8	0.52	2.0	ng/l	80.0	101	70-130	3	30		
PFOA	82.6	0.67	2.0	ng/l	80.0	103	70-130	1	30		
PFOS	80.4	0.53	2.0	ng/l	80.0	101	70-130	0.2	30		
PFTeDA	69.6	0.45	2.0	ng/l	80.0	87	70-130	6	30		
PFTTrDA	77.8	0.42	2.0	ng/l	80.0	97	70-130	0.5	30		
PFUnA	80.5	0.48	2.0	ng/l	80.0	101	70-130	0.1	30		
<i>Surrogate(s)</i>											
13C2-PFDA	44.6			ng/l	40.0	111	70-130				
13C2-PFHxA	43.9			ng/l	40.0	110	70-130				
d5-EtFOSAA	160			ng/l	160	100	70-130				
HFPO-DA-13C3	43.8			ng/l	40.0	109	70-130				

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4C0004 - EPA 524.2											
Blank (W4C0004-BLK1)						Prepared & Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0004 - EPA 524.2 (Continued)											
Blank (W4C0004-BLK1)						Prepared & Analyzed: 03/01/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	39.4			ug/l	50.0		79	70-130			
4-Bromofluorobenzene	41.7			ug/l	50.0		83	70-130			
LCS (W4C0004-BS1)						Prepared & Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	4.77	0.24	0.50	ug/l	5.00		95	70-130			
1,1,1-Trichloroethane	4.69	0.26	0.50	ug/l	5.00		94	70-130			
1,1,2,2-Tetrachloroethane	4.37	0.20	0.50	ug/l	5.00		87	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4C0004 - EPA 524.2 (Continued)									
LCS (W4C0004-BS1)					Prepared & Analyzed: 03/01/24				
1,1,2-Trichloroethane	4.45	0.19	0.50	ug/l	5.00	89	70-130		
1,1-Dichloroethane	4.39	0.27	0.50	ug/l	5.00	88	70-130		
1,1-Dichloroethene	4.26	0.16	0.50	ug/l	5.00	85	70-130		
1,1-Dichloropropene	4.29	0.14	0.50	ug/l	5.00	86	70-130		
1,2,3-Trichlorobenzene	5.26	0.40	0.50	ug/l	5.00	105	70-130		
1,2,3-Trichloropropane	4.93	0.22	0.50	ug/l	5.00	99	70-130		
1,2,4-Trichlorobenzene	5.44	0.17	0.50	ug/l	5.00	109	70-130		
1,2,4-Trimethylbenzene	4.71	0.20	0.50	ug/l	5.00	94	70-130		
1,2-Dichloroethane	4.30	0.24	0.50	ug/l	5.00	86	70-130		
1,2-Dichloropropane	4.11	0.13	0.50	ug/l	5.00	82	70-130		
1,3,5-Trimethylbenzene	4.64	0.17	0.50	ug/l	5.00	93	70-130		
1,3-Dichloropropane	4.49	0.27	0.50	ug/l	5.00	90	70-130		
2,2-Dichloropropane	4.81	0.17	0.50	ug/l	5.00	96	70-130		
2-Butanone	3.62	1.5	5.0	ug/l	5.00	72	70-130		J
2-Chlorotoluene	5.04	0.15	0.50	ug/l	5.00	101	70-130		
2-Hexanone	4.54	1.2	5.0	ug/l	5.00	91	70-130		J
4-Chlorotoluene	5.01	0.15	0.50	ug/l	5.00	100	70-130		
4-Methyl-2-pentanone	4.33	1.8	5.0	ug/l	5.00	87	70-130		J
Acetone	38.8	3.1	5.0	ug/l	50.0	78	70-130		
Benzene	4.49	0.15	0.50	ug/l	5.00	90	70-130		
Bromobenzene	5.06	0.15	0.50	ug/l	5.00	101	70-130		
Bromochloromethane	4.05	0.15	0.50	ug/l	5.00	81	70-130		
Bromodichloromethane	4.39	0.24	0.50	ug/l	5.00	88	70-130		
Bromoform	5.40	0.38	0.50	ug/l	5.00	108	70-130		
Bromomethane	4.46	0.27	0.50	ug/l	5.00	89	70-130		
Carbon Disulfide	4.35	0.25	0.50	ug/l	5.00	87	70-130		
Carbon tetrachloride	4.97	0.27	0.50	ug/l	5.00	99	70-130		
Chlorobenzene	5.50	0.15	0.50	ug/l	5.00	110	70-130		
Chloroethane	4.22	0.17	0.50	ug/l	5.00	84	70-130		
Chloroform	4.51	0.27	0.50	ug/l	5.00	90	70-130		
Chloromethane	3.61	0.23	0.50	ug/l	5.00	72	70-130		
cis-1,2-Dichloroethene	4.26	0.25	0.50	ug/l	5.00	85	70-130		
cis-1,3-Dichloropropene	4.53	0.30	0.50	ug/l	5.00	91	70-130		
Dibromochloromethane	4.93	0.20	0.50	ug/l	5.00	99	70-130		
Dibromomethane	4.58	0.20	0.50	ug/l	5.00	92	70-130		
Dichlorodifluoromethane (Freon 12)	4.27	0.45	0.50	ug/l	5.00	85	70-130		
Di-isopropyl ether	15.4	1.1	2.0	ug/l	20.0	77	70-130		
Ethyl tert-butyl ether	17.6	1.0	2.0	ug/l	20.0	88	70-130		
Ethylbenzene	4.54	0.21	0.50	ug/l	5.00	91	70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0004 - EPA 524.2 (Continued)										
LCS (W4C0004-BS1)					Prepared & Analyzed: 03/01/24					
Freon 113	4.73	1.5	5.0	ug/l	5.00		95 70-130			J
Hexachlorobutadiene	5.71	0.40	0.50	ug/l	5.00		114 70-130			
Isopropylbenzene	4.70	0.18	0.50	ug/l	5.00		94 70-130			
m,p-Xylene	4.52	0.33	0.50	ug/l	5.00		90 70-130			
m-Dichlorobenzene	5.12	0.14	0.50	ug/l	5.00		102 70-130			
Methyl tert-butyl ether (MTBE)	17.6	0.94	2.0	ug/l	20.0		88 70-130			
Methylene chloride	3.95	0.30	0.50	ug/l	5.00		79 70-130			
Naphthalene	4.69	0.35	0.50	ug/l	5.00		94 70-130			
n-Butylbenzene	4.89	0.29	0.50	ug/l	5.00		98 70-130			
n-Propylbenzene	4.46	0.18	0.50	ug/l	5.00		89 70-130			
o-Dichlorobenzene	5.06	0.19	0.50	ug/l	5.00		101 70-130			
o-Xylene	4.80	0.20	0.50	ug/l	5.00		96 70-130			
p-Dichlorobenzene	5.27	0.18	0.50	ug/l	5.00		105 70-130			
p-Isopropyltoluene	4.83	0.25	0.50	ug/l	5.00		97 70-130			
sec-Butylbenzene	4.71	0.24	0.50	ug/l	5.00		94 70-130			
Styrene	4.76	0.19	0.50	ug/l	5.00		95 70-130			
Tert-amyl methyl ether	18.3	0.59	2.0	ug/l	20.0		91 70-130			
tert-Butylbenzene	4.86	0.18	0.50	ug/l	5.00		97 70-130			
Tetrachloroethene	5.47	0.18	0.50	ug/l	5.00		109 70-130			
Toluene	4.49	0.29	0.50	ug/l	5.00		90 70-130			
trans-1,2-Dichloroethene	4.31	0.26	0.50	ug/l	5.00		86 70-130			
trans-1,3-Dichloropropene	4.97	0.32	0.50	ug/l	5.00		99 70-130			
Trichloroethene	4.92	0.18	0.50	ug/l	5.00		98 70-130			
Trichlorofluoromethane	4.78	0.18	0.50	ug/l	5.00		96 70-130			
Vinyl chloride	4.03	0.18	0.50	ug/l	5.00		81 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	46.3			ug/l	50.0		93 70-130			
4-Bromofluorobenzene	45.4			ug/l	50.0		91 70-130			
LCS Dup (W4C0004-BS1)					Prepared & Analyzed: 03/01/24					
1,1,1,2-Tetrachloroethane	4.52	0.24	0.50	ug/l	5.00		90 70-130	5	30	
1,1,1-Trichloroethane	4.42	0.26	0.50	ug/l	5.00		88 70-130	6	30	
1,1,2,2-Tetrachloroethane	4.26	0.20	0.50	ug/l	5.00		85 70-130	3	30	
1,1,2-Trichloroethane	4.11	0.19	0.50	ug/l	5.00		82 70-130	8	30	
1,1-Dichloroethane	4.25	0.27	0.50	ug/l	5.00		85 70-130	3	30	
1,1-Dichloroethene	4.09	0.16	0.50	ug/l	5.00		82 70-130	4	30	
1,1-Dichloropropene	4.11	0.14	0.50	ug/l	5.00		82 70-130	4	30	
1,2,3-Trichlorobenzene	5.12	0.40	0.50	ug/l	5.00		102 70-130	3	30	
1,2,3-Trichloropropane	4.59	0.22	0.50	ug/l	5.00		92 70-130	7	30	
1,2,4-Trichlorobenzene	5.53	0.17	0.50	ug/l	5.00		111 70-130	2	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0004 - EPA 524.2 (Continued)										
LCS Dup (W4C0004-BSD1)					Prepared & Analyzed: 03/01/24					
1,2,4-Trimethylbenzene	4.42	0.20	0.50	ug/l	5.00	88	70-130	7	30	
1,2-Dichloroethane	4.29	0.24	0.50	ug/l	5.00	86	70-130	0.4	30	
1,2-Dichloropropane	4.04	0.13	0.50	ug/l	5.00	81	70-130	2	30	
1,3,5-Trimethylbenzene	4.33	0.17	0.50	ug/l	5.00	87	70-130	7	30	
1,3-Dichloropropane	4.37	0.27	0.50	ug/l	5.00	87	70-130	3	30	
2,2-Dichloropropane	4.42	0.17	0.50	ug/l	5.00	88	70-130	8	30	
2-Butanone	3.59	1.5	5.0	ug/l	5.00	72	70-130	1	30	J
2-Chlorotoluene	4.72	0.15	0.50	ug/l	5.00	94	70-130	7	30	
2-Hexanone	4.48	1.2	5.0	ug/l	5.00	90	70-130	1	30	J
4-Chlorotoluene	4.74	0.15	0.50	ug/l	5.00	95	70-130	5	30	
4-Methyl-2-pentanone	4.41	1.8	5.0	ug/l	5.00	88	70-130	2	30	J
Acetone	38.7	3.1	5.0	ug/l	50.0	77	70-130	0.2	30	
Benzene	4.33	0.15	0.50	ug/l	5.00	87	70-130	4	30	
Bromobenzene	4.80	0.15	0.50	ug/l	5.00	96	70-130	5	30	
Bromochloromethane	4.05	0.15	0.50	ug/l	5.00	81	70-130	0.08	30	
Bromodichloromethane	4.31	0.24	0.50	ug/l	5.00	86	70-130	2	30	
Bromoform	5.13	0.38	0.50	ug/l	5.00	103	70-130	5	30	
Bromomethane	4.38	0.27	0.50	ug/l	5.00	88	70-130	2	30	
Carbon Disulfide	4.15	0.25	0.50	ug/l	5.00	83	70-130	5	30	
Carbon tetrachloride	4.55	0.27	0.50	ug/l	5.00	91	70-130	9	30	
Chlorobenzene	5.19	0.15	0.50	ug/l	5.00	104	70-130	6	30	
Chloroethane	4.14	0.17	0.50	ug/l	5.00	83	70-130	2	30	
Chloroform	4.35	0.27	0.50	ug/l	5.00	87	70-130	4	30	
Chloromethane	3.56	0.23	0.50	ug/l	5.00	71	70-130	1	30	
cis-1,2-Dichloroethene	4.11	0.25	0.50	ug/l	5.00	82	70-130	3	30	
cis-1,3-Dichloropropene	4.38	0.30	0.50	ug/l	5.00	88	70-130	3	30	
Dibromochloromethane	4.65	0.20	0.50	ug/l	5.00	93	70-130	6	30	
Dibromomethane	4.45	0.20	0.50	ug/l	5.00	89	70-130	3	30	
Dichlorodifluoromethane (Freon 12)	3.84	0.45	0.50	ug/l	5.00	77	70-130	10	30	
Di-isopropyl ether	15.5	1.1	2.0	ug/l	20.0	77	70-130	0.6	30	
Ethyl tert-butyl ether	17.2	1.0	2.0	ug/l	20.0	86	70-130	2	30	
Ethylbenzene	4.23	0.21	0.50	ug/l	5.00	85	70-130	7	30	
Freon 113	4.37	1.5	5.0	ug/l	5.00	87	70-130	8	30	J
Hexachlorobutadiene	5.38	0.40	0.50	ug/l	5.00	108	70-130	6	30	
Isopropylbenzene	4.35	0.18	0.50	ug/l	5.00	87	70-130	8	30	
m,p-Xylene	4.16	0.33	0.50	ug/l	5.00	83	70-130	8	30	
m-Dichlorobenzene	4.93	0.14	0.50	ug/l	5.00	99	70-130	4	30	
Methyl tert-butyl ether (MTBE)	17.6	0.94	2.0	ug/l	20.0	88	70-130	0.009	30	
Methylene chloride	3.88	0.30	0.50	ug/l	5.00	78	70-130	2	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0004 - EPA 524.2 (Continued)										
LCS Dup (W4C0004-BSD1)					Prepared & Analyzed: 03/01/24					
Naphthalene	4.76	0.35	0.50	ug/l	5.00	95	70-130	1	30	
n-Butylbenzene	4.63	0.29	0.50	ug/l	5.00	93	70-130	5	30	
n-Propylbenzene	4.16	0.18	0.50	ug/l	5.00	83	70-130	7	30	
o-Dichlorobenzene	4.86	0.19	0.50	ug/l	5.00	97	70-130	4	30	
o-Xylene	4.43	0.20	0.50	ug/l	5.00	89	70-130	8	30	
p-Dichlorobenzene	4.99	0.18	0.50	ug/l	5.00	100	70-130	5	30	
p-Isopropyltoluene	4.58	0.25	0.50	ug/l	5.00	92	70-130	5	30	
sec-Butylbenzene	4.38	0.24	0.50	ug/l	5.00	88	70-130	7	30	
Styrene	4.52	0.19	0.50	ug/l	5.00	90	70-130	5	30	
Tert-amyl methyl ether	17.8	0.59	2.0	ug/l	20.0	89	70-130	3	30	
tert-Butylbenzene	4.54	0.18	0.50	ug/l	5.00	91	70-130	7	30	
Tetrachloroethene	5.31	0.18	0.50	ug/l	5.00	106	70-130	3	30	
Toluene	4.21	0.29	0.50	ug/l	5.00	84	70-130	7	30	
trans-1,2-Dichloroethene	4.14	0.26	0.50	ug/l	5.00	83	70-130	4	30	
trans-1,3-Dichloropropene	4.80	0.32	0.50	ug/l	5.00	96	70-130	4	30	
Trichloroethene	4.66	0.18	0.50	ug/l	5.00	93	70-130	5	30	
Trichlorofluoromethane	4.42	0.18	0.50	ug/l	5.00	88	70-130	8	30	
Vinyl chloride	3.80	0.18	0.50	ug/l	5.00	76	70-130	6	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	46.0			ug/l	50.0	92	70-130			
4-Bromofluorobenzene	45.3			ug/l	50.0	91	70-130			

Batch: W4C0005 - EPA 524.2

Blank (W4C0005-BLK1)					Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l						
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l						
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l						
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l						
1,1-Dichloroethane	ND	0.27	0.50	ug/l						
1,1-Dichloroethene	ND	0.16	0.50	ug/l						
1,1-Dichloropropene	ND	0.14	0.50	ug/l						
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l						
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l						
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l						
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l						
1,2-Dichloroethane	ND	0.24	0.50	ug/l						
1,2-Dichloropropane	ND	0.13	0.50	ug/l						
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l						
1,3-Dichloropropane	ND	0.27	0.50	ug/l						
1,3-Dichloropropene, Total	ND		0.50	ug/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
Blank (W4C0005-BLK1)						Prepared: 03/01/24 Analyzed: 03/02/24					
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
Blank (W4C0005-BLK1)						Prepared: 03/01/24 Analyzed: 03/02/24					
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.4			ug/l	50.0		81	70-130			
4-Bromofluorobenzene	41.9			ug/l	50.0		84	70-130			
LCS (W4C0005-BS1)						Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	4.84	0.24	0.50	ug/l	5.00		97	70-130			
1,1,1-Trichloroethane	4.65	0.26	0.50	ug/l	5.00		93	70-130			
1,1,2,2-Tetrachloroethane	4.37	0.20	0.50	ug/l	5.00		87	70-130			
1,1,2-Trichloroethane	4.51	0.19	0.50	ug/l	5.00		90	70-130			
1,1-Dichloroethane	4.22	0.27	0.50	ug/l	5.00		84	70-130			
1,1-Dichloroethene	4.08	0.16	0.50	ug/l	5.00		82	70-130			
1,1-Dichloropropene	4.11	0.14	0.50	ug/l	5.00		82	70-130			
1,2,3-Trichlorobenzene	5.16	0.40	0.50	ug/l	5.00		103	70-130			
1,2,3-Trichloropropane	4.76	0.22	0.50	ug/l	5.00		95	70-130			
1,2,4-Trichlorobenzene	5.41	0.17	0.50	ug/l	5.00		108	70-130			
1,2,4-Trimethylbenzene	4.59	0.20	0.50	ug/l	5.00		92	70-130			
1,2-Dichloroethane	4.24	0.24	0.50	ug/l	5.00		85	70-130			
1,2-Dichloropropane	3.98	0.13	0.50	ug/l	5.00		80	70-130			
1,3,5-Trimethylbenzene	4.56	0.17	0.50	ug/l	5.00		91	70-130			
1,3-Dichloropropane	4.59	0.27	0.50	ug/l	5.00		92	70-130			
2,2-Dichloropropane	4.36	0.17	0.50	ug/l	5.00		87	70-130			
2-Butanone	3.64	1.5	5.0	ug/l	5.00		73	70-130			J
2-Chlorotoluene	4.92	0.15	0.50	ug/l	5.00		98	70-130			
2-Hexanone	4.46	1.2	5.0	ug/l	5.00		89	70-130			J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)									
LCS (W4C0005-BS1)					Prepared: 03/01/24 Analyzed: 03/02/24				
4-Chlorotoluene	4.90	0.15	0.50	ug/l	5.00	98	70-130		
4-Methyl-2-pentanone	4.28	1.8	5.0	ug/l	5.00	86	70-130		J
Acetone	40.2	3.1	5.0	ug/l	50.0	80	70-130		
Benzene	4.36	0.15	0.50	ug/l	5.00	87	70-130		
Bromobenzene	5.09	0.15	0.50	ug/l	5.00	102	70-130		
Bromochloromethane	3.94	0.15	0.50	ug/l	5.00	79	70-130		
Bromodichloromethane	4.31	0.24	0.50	ug/l	5.00	86	70-130		
Bromoform	5.43	0.38	0.50	ug/l	5.00	109	70-130		
Bromomethane	4.36	0.27	0.50	ug/l	5.00	87	70-130		
Carbon Disulfide	4.13	0.25	0.50	ug/l	5.00	83	70-130		
Carbon tetrachloride	4.79	0.27	0.50	ug/l	5.00	96	70-130		
Chlorobenzene	5.53	0.15	0.50	ug/l	5.00	111	70-130		
Chloroethane	3.99	0.17	0.50	ug/l	5.00	80	70-130		
Chloroform	4.34	0.27	0.50	ug/l	5.00	87	70-130		
Chloromethane	3.41	0.23	0.50	ug/l	5.00	68	70-130		Q-ME
cis-1,2-Dichloroethene	4.09	0.25	0.50	ug/l	5.00	82	70-130		
cis-1,3-Dichloropropene	4.58	0.30	0.50	ug/l	5.00	92	70-130		
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00	99	70-130		
Dibromomethane	4.48	0.20	0.50	ug/l	5.00	90	70-130		
Dichlorodifluoromethane (Freon 12)	4.07	0.45	0.50	ug/l	5.00	81	70-130		
Di-isopropyl ether	15.4	1.1	2.0	ug/l	20.0	77	70-130		
Ethyl tert-butyl ether	17.8	1.0	2.0	ug/l	20.0	89	70-130		
Ethylbenzene	4.51	0.21	0.50	ug/l	5.00	90	70-130		
Freon 113	4.45	1.5	5.0	ug/l	5.00	89	70-130		J
Hexachlorobutadiene	5.53	0.40	0.50	ug/l	5.00	111	70-130		
Isopropylbenzene	4.64	0.18	0.50	ug/l	5.00	93	70-130		
m,p-Xylene	4.45	0.33	0.50	ug/l	5.00	89	70-130		
m-Dichlorobenzene	4.82	0.14	0.50	ug/l	5.00	96	70-130		
Methyl tert-butyl ether (MTBE)	18.2	0.94	2.0	ug/l	20.0	91	70-130		
Methylene chloride	3.76	0.30	0.50	ug/l	5.00	75	70-130		
Naphthalene	4.75	0.35	0.50	ug/l	5.00	95	70-130		
n-Butylbenzene	4.56	0.29	0.50	ug/l	5.00	91	70-130		
n-Propylbenzene	4.36	0.18	0.50	ug/l	5.00	87	70-130		
o-Dichlorobenzene	4.95	0.19	0.50	ug/l	5.00	99	70-130		
o-Xylene	4.72	0.20	0.50	ug/l	5.00	94	70-130		
p-Dichlorobenzene	5.01	0.18	0.50	ug/l	5.00	100	70-130		
p-Isopropyltoluene	4.55	0.25	0.50	ug/l	5.00	91	70-130		
sec-Butylbenzene	4.40	0.24	0.50	ug/l	5.00	88	70-130		
Styrene	4.75	0.19	0.50	ug/l	5.00	95	70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)										
LCS (W4C0005-BS1)					Prepared: 03/01/24 Analyzed: 03/02/24					
Tert-amyl methyl ether	18.6	0.59	2.0	ug/l	20.0	93	70-130			
tert-Butylbenzene	4.70	0.18	0.50	ug/l	5.00	94	70-130			
Tetrachloroethene	5.35	0.18	0.50	ug/l	5.00	107	70-130			
Toluene	4.51	0.29	0.50	ug/l	5.00	90	70-130			
trans-1,2-Dichloroethene	4.12	0.26	0.50	ug/l	5.00	82	70-130			
trans-1,3-Dichloropropene	4.86	0.32	0.50	ug/l	5.00	97	70-130			
Trichloroethene	4.70	0.18	0.50	ug/l	5.00	94	70-130			
Trichlorofluoromethane	4.67	0.18	0.50	ug/l	5.00	93	70-130			
Vinyl chloride	3.73	0.18	0.50	ug/l	5.00	75	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0	93	70-130			
4-Bromofluorobenzene	46.6			ug/l	50.0	93	70-130			
LCS Dup (W4C0005-BSD1)					Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	4.57	0.24	0.50	ug/l	5.00	91	70-130	6	30	
1,1,1-Trichloroethane	4.51	0.26	0.50	ug/l	5.00	90	70-130	3	30	
1,1,2,2-Tetrachloroethane	4.18	0.20	0.50	ug/l	5.00	84	70-130	4	30	
1,1,2-Trichloroethane	4.29	0.19	0.50	ug/l	5.00	86	70-130	5	30	
1,1-Dichloroethane	4.29	0.27	0.50	ug/l	5.00	86	70-130	2	30	
1,1-Dichloroethene	4.03	0.16	0.50	ug/l	5.00	81	70-130	1	30	
1,1-Dichloropropene	4.02	0.14	0.50	ug/l	5.00	80	70-130	2	30	
1,2,3-Trichlorobenzene	4.94	0.40	0.50	ug/l	5.00	99	70-130	4	30	
1,2,3-Trichloropropane	4.45	0.22	0.50	ug/l	5.00	89	70-130	7	30	
1,2,4-Trichlorobenzene	5.48	0.17	0.50	ug/l	5.00	110	70-130	1	30	
1,2,4-Trimethylbenzene	4.32	0.20	0.50	ug/l	5.00	86	70-130	6	30	
1,2-Dichloroethane	4.30	0.24	0.50	ug/l	5.00	86	70-130	1	30	
1,2-Dichloropropane	3.98	0.13	0.50	ug/l	5.00	80	70-130	0.1	30	
1,3,5-Trimethylbenzene	4.20	0.17	0.50	ug/l	5.00	84	70-130	8	30	
1,3-Dichloropropane	4.35	0.27	0.50	ug/l	5.00	87	70-130	5	30	
2,2-Dichloropropane	3.77	0.17	0.50	ug/l	5.00	75	70-130	15	30	
2-Butanone	3.59	1.5	5.0	ug/l	5.00	72	70-130	1	30	J
2-Chlorotoluene	4.65	0.15	0.50	ug/l	5.00	93	70-130	6	30	
2-Hexanone	4.32	1.2	5.0	ug/l	5.00	86	70-130	3	30	J
4-Chlorotoluene	4.57	0.15	0.50	ug/l	5.00	91	70-130	7	30	
4-Methyl-2-pentanone	4.17	1.8	5.0	ug/l	5.00	83	70-130	2	30	J
Acetone	37.6	3.1	5.0	ug/l	50.0	75	70-130	7	30	
Benzene	4.35	0.15	0.50	ug/l	5.00	87	70-130	0.3	30	
Bromobenzene	4.74	0.15	0.50	ug/l	5.00	95	70-130	7	30	
Bromochloromethane	4.02	0.15	0.50	ug/l	5.00	80	70-130	2	30	
Bromodichloromethane	4.25	0.24	0.50	ug/l	5.00	85	70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
LCS Dup (W4C0005-BSD1)						Prepared: 03/01/24 Analyzed: 03/02/24					
Bromoform	5.25	0.38	0.50	ug/l	5.00	105	70-130	4	30		
Bromomethane	4.32	0.27	0.50	ug/l	5.00	86	70-130	0.9	30		
Carbon Disulfide	4.12	0.25	0.50	ug/l	5.00	82	70-130	0.3	30		
Carbon tetrachloride	4.59	0.27	0.50	ug/l	5.00	92	70-130	4	30		
Chlorobenzene	5.32	0.15	0.50	ug/l	5.00	106	70-130	4	30		
Chloroethane	3.91	0.17	0.50	ug/l	5.00	78	70-130	2	30		
Chloroform	4.33	0.27	0.50	ug/l	5.00	87	70-130	0.2	30		
Chloromethane	3.37	0.23	0.50	ug/l	5.00	67	70-130	1	30		Q-ME
cis-1,2-Dichloroethene	4.11	0.25	0.50	ug/l	5.00	82	70-130	0.5	30		
cis-1,3-Dichloropropene	4.30	0.30	0.50	ug/l	5.00	86	70-130	6	30		
Dibromochloromethane	4.74	0.20	0.50	ug/l	5.00	95	70-130	4	30		
Dibromomethane	4.42	0.20	0.50	ug/l	5.00	88	70-130	1	30		
Dichlorodifluoromethane (Freon 12)	3.83	0.45	0.50	ug/l	5.00	77	70-130	6	30		
Di-isopropyl ether	15.2	1.1	2.0	ug/l	20.0	76	70-130	2	30		
Ethyl tert-butyl ether	17.1	1.0	2.0	ug/l	20.0	86	70-130	4	30		
Ethylbenzene	4.24	0.21	0.50	ug/l	5.00	85	70-130	6	30		
Freon 113	4.44	1.5	5.0	ug/l	5.00	89	70-130	0.3	30		J
Hexachlorobutadiene	5.29	0.40	0.50	ug/l	5.00	106	70-130	4	30		
Isopropylbenzene	4.33	0.18	0.50	ug/l	5.00	87	70-130	7	30		
m,p-Xylene	4.14	0.33	0.50	ug/l	5.00	83	70-130	7	30		
m-Dichlorobenzene	4.68	0.14	0.50	ug/l	5.00	94	70-130	3	30		
Methyl tert-butyl ether (MTBE)	17.5	0.94	2.0	ug/l	20.0	88	70-130	4	30		
Methylene chloride	3.91	0.30	0.50	ug/l	5.00	78	70-130	4	30		
Naphthalene	4.68	0.35	0.50	ug/l	5.00	94	70-130	1	30		
n-Butylbenzene	4.33	0.29	0.50	ug/l	5.00	87	70-130	5	30		
n-Propylbenzene	4.06	0.18	0.50	ug/l	5.00	81	70-130	7	30		
o-Dichlorobenzene	4.72	0.19	0.50	ug/l	5.00	94	70-130	5	30		
o-Xylene	4.45	0.20	0.50	ug/l	5.00	89	70-130	6	30		
p-Dichlorobenzene	4.76	0.18	0.50	ug/l	5.00	95	70-130	5	30		
p-Isopropyltoluene	4.36	0.25	0.50	ug/l	5.00	87	70-130	4	30		
sec-Butylbenzene	4.18	0.24	0.50	ug/l	5.00	84	70-130	5	30		
Styrene	4.47	0.19	0.50	ug/l	5.00	89	70-130	6	30		
Tert-amyl methyl ether	17.5	0.59	2.0	ug/l	20.0	87	70-130	6	30		
tert-Butylbenzene	4.43	0.18	0.50	ug/l	5.00	89	70-130	6	30		
Tetrachloroethene	5.04	0.18	0.50	ug/l	5.00	101	70-130	6	30		
Toluene	4.24	0.29	0.50	ug/l	5.00	85	70-130	6	30		
trans-1,2-Dichloroethene	4.17	0.26	0.50	ug/l	5.00	83	70-130	1	30		
trans-1,3-Dichloropropene	4.56	0.32	0.50	ug/l	5.00	91	70-130	6	30		
Trichloroethene	4.63	0.18	0.50	ug/l	5.00	93	70-130	2	30		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
LCS Dup (W4C0005-BSD1)											
					Prepared: 03/01/24 Analyzed: 03/02/24						
Trichlorofluoromethane	4.36	0.18	0.50	ug/l	5.00		87	70-130	7	30	
Vinyl chloride	3.76	0.18	0.50	ug/l	5.00		75	70-130	0.6	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.6			ug/l	50.0		91	70-130			
4-Bromofluorobenzene	46.0			ug/l	50.0		92	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:23

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
O-05	The extraction for this analyte was performed outside of the EPA recommended holding time.
Q-ME	Acceptable QC with marginal exceedance
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20053

Report Date: 4/29/2024

Received Date: 2/18/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

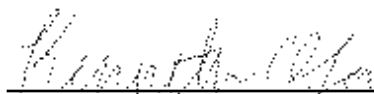
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/18/24 with the Chain-of-Custody document. The samples were received in good condition, at 12.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/29/2024 10:35

Project Manager: Brown & Caldwell

Case Narrative

This is a Supplement to the Certificate of Analysis previously issued 4/4/2024 for the above referenced Project to report additional metals requested by Steven Shiokari.

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-7-S4	Brown & Caldwell	4B20053-01	Water	02/18/24 11:30	
AT-RES-7-S22	Brown & Caldwell	4B20053-03	Water	02/18/24 09:55	

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 200.8 in Water				
Uranium, Total	7440-61-1			⊗

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/29/2024 10:35

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20053-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2090		Preparation: EPA 200.2		Prepared: 02/26/24 13:50		Analyst: tyc	
Antimony, Total	ND	0.089	0.50	ug/l	1	02/29/24	
Beryllium, Total	ND	0.029	0.10	ug/l	1	02/29/24	
Cadmium, Total	ND	0.042	0.20	ug/l	1	02/29/24	
Chromium, Total	ND	0.089	0.20	ug/l	1	02/29/24	
Nickel, Total	ND	0.40	2.0	ug/l	1	02/29/24	
Silver, Total	ND	0.027	0.20	ug/l	1	02/29/24	
Thallium, Total	ND	0.021	0.20	ug/l	1	02/29/24	
Uranium, Total	2.8	0.02	0.20	ug/l	1	02/29/24	
Vanadium, Total	0.32	0.16	0.50	ug/l	1	02/29/24	J
Zinc, Total	ND	1.7	10	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/29/2024 10:35

Project Manager: Brown & Caldwell

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8											
Blank (W4B2090-BLK1)						Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	ND	0.089	0.50	ug/l							
Beryllium, Total	ND	0.029	0.10	ug/l							
Cadmium, Total	ND	0.042	0.20	ug/l							
Chromium, Total	ND	0.089	0.20	ug/l							
Nickel, Total	ND	0.40	2.0	ug/l							
Silver, Total	ND	0.027	0.20	ug/l							
Thallium, Total	ND	0.021	0.20	ug/l							
Uranium, Total	ND	0.02	0.20	ug/l							
Vanadium, Total	ND	0.16	0.50	ug/l							
Zinc, Total	ND	1.7	10	ug/l							
LCS (W4B2090-BS1)						Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	48.8	0.089	0.50	ug/l	50.0		98	85-115			
Beryllium, Total	49.7	0.029	0.10	ug/l	50.0		99	85-115			
Cadmium, Total	49.8	0.042	0.20	ug/l	50.0		100	85-115			
Chromium, Total	50.7	0.089	0.20	ug/l	50.0		101	85-115			
Nickel, Total	51.5	0.40	2.0	ug/l	50.0		103	85-115			
Silver, Total	50.1	0.027	0.20	ug/l	50.0		100	85-115			
Thallium, Total	49.3	0.021	0.20	ug/l	50.0		99	85-115			
Uranium, Total	48.1	0.02	0.20	ug/l	50.0		96	85-115			
Vanadium, Total	50.6	0.16	0.50	ug/l	50.0		101	85-115			
Zinc, Total	51.6	1.7	10	ug/l	50.0		103	85-115			
Matrix Spike (W4B2090-MS1)						Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	50.0	0.089	0.50	ug/l	50.0	ND	100	70-130			
Beryllium, Total	50.9	0.029	0.10	ug/l	50.0	ND	102	70-130			
Cadmium, Total	49.5	0.042	0.20	ug/l	50.0	ND	99	70-130			
Chromium, Total	49.6	0.089	0.20	ug/l	50.0	0.123	99	70-130			
Nickel, Total	48.8	0.40	2.0	ug/l	50.0	ND	97	70-130			
Silver, Total	49.5	0.027	0.20	ug/l	50.0	ND	99	70-130			
Thallium, Total	50.2	0.021	0.20	ug/l	50.0	ND	100	70-130			
Uranium, Total	52.5	0.02	0.20	ug/l	50.0	2.37	100	70-130			
Vanadium, Total	50.6	0.16	0.50	ug/l	50.0	0.406	100	70-130			
Zinc, Total	49.9	1.7	10	ug/l	50.0	ND	100	70-130			
Matrix Spike (W4B2090-MS2)						Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24					
Antimony, Total	50.7	0.089	0.50	ug/l	50.0	0.271	101	70-130			
Beryllium, Total	49.1	0.029	0.10	ug/l	50.0	ND	98	70-130			
Cadmium, Total	49.5	0.042	0.20	ug/l	50.0	0.0425	99	70-130			
Chromium, Total	51.9	0.089	0.20	ug/l	50.0	2.50	99	70-130			
Nickel, Total	50.0	0.40	2.0	ug/l	50.0	2.23	96	70-130			
Silver, Total	48.8	0.027	0.20	ug/l	50.0	ND	98	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/29/2024 10:35

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike (W4B2090-MS2)			Source: 4B20053-01			Prepared: 02/26/24			Analyzed: 02/29/24		
Thallium, Total	50.2	0.021	0.20	ug/l	50.0	ND	100	70-130			
Uranium, Total	71.3	0.02	0.20	ug/l	50.0	19.9	103	70-130			
Vanadium, Total	55.4	0.16	0.50	ug/l	50.0	5.06	101	70-130			
Zinc, Total	48.5	1.7	10	ug/l	50.0	ND	97	70-130			
Matrix Spike Dup (W4B2090-MSD1)			Source: 4B16119-03			Prepared: 02/26/24			Analyzed: 02/29/24		
Antimony, Total	50.0	0.089	0.50	ug/l	50.0	ND	100	70-130	0.06	30	
Beryllium, Total	50.2	0.029	0.10	ug/l	50.0	ND	100	70-130	1	30	
Cadmium, Total	49.6	0.042	0.20	ug/l	50.0	ND	99	70-130	0.2	30	
Chromium, Total	50.5	0.089	0.20	ug/l	50.0	0.123	101	70-130	2	30	
Nickel, Total	49.6	0.40	2.0	ug/l	50.0	ND	99	70-130	2	30	
Silver, Total	49.4	0.027	0.20	ug/l	50.0	ND	99	70-130	0.3	30	
Thallium, Total	50.0	0.021	0.20	ug/l	50.0	ND	100	70-130	0.4	30	
Uranium, Total	52.2	0.02	0.20	ug/l	50.0	2.37	100	70-130	0.5	30	
Vanadium, Total	50.8	0.16	0.50	ug/l	50.0	0.406	101	70-130	0.3	30	
Zinc, Total	49.3	1.7	10	ug/l	50.0	ND	98	70-130	1	30	
Matrix Spike Dup (W4B2090-MSD2)			Source: 4B20053-01			Prepared: 02/26/24			Analyzed: 02/29/24		
Antimony, Total	50.2	0.089	0.50	ug/l	50.0	0.271	100	70-130	1	30	
Beryllium, Total	49.6	0.029	0.10	ug/l	50.0	ND	99	70-130	1	30	
Cadmium, Total	48.4	0.042	0.20	ug/l	50.0	0.0425	97	70-130	2	30	
Chromium, Total	52.1	0.089	0.20	ug/l	50.0	2.50	99	70-130	0.2	30	
Nickel, Total	50.5	0.40	2.0	ug/l	50.0	2.23	96	70-130	0.8	30	
Silver, Total	48.5	0.027	0.20	ug/l	50.0	ND	97	70-130	0.7	30	
Thallium, Total	49.6	0.021	0.20	ug/l	50.0	ND	99	70-130	1	30	
Uranium, Total	70.3	0.02	0.20	ug/l	50.0	19.9	101	70-130	1	30	
Vanadium, Total	55.7	0.16	0.50	ug/l	50.0	5.06	101	70-130	0.6	30	
Zinc, Total	48.3	1.7	10	ug/l	50.0	ND	97	70-130	0.2	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/29/2024 10:35

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20053

Report Date: 4/08/2024

Received Date: 2/18/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

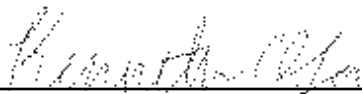
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/18/24 with the Chain-of-Custody document. The samples were received in good condition, at 12.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-7-S4	Brown & Caldwell	4B20053-01	Water	02/18/24 11:30	
AT-GS-7-S7	Brown & Caldwell	4B20053-02	Water	02/18/24 11:30	
AT-RES-7-S22	Brown & Caldwell	4B20053-03	Water	02/18/24 09:55	
Trip Blank	Brown & Caldwell	4B20053-05	Water	02/18/24 09:55	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3			⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
SM 2330B in Water				



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
SM 2330B in Water (Continued)				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20053-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.25	0.0090	0.10	mg/l	1	02/18/24	
Nitrate as N	5800	22	110	ug/l	1	02/18/24 18:48	
Nitrite as N	ND	29	150	ug/l	1	02/18/24 18:48	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C0178	Preparation: _NONE (METALS)		Prepared: 03/04/24 13:52		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/04/24	
Method: EPA 140.1			Instr: WB07				
Batch ID: W4B1479	Preparation: _NONE (WETCHEM)		Prepared: 02/18/24 15:17		Analyst: ymt		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/18/24 16:37	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	0.51	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0713	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 15:26		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/13/24	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0973	Preparation: _NONE (WETCHEM)		Prepared: 03/12/24 20:02		Analyst: rob		
Phosphorus as PO4, Total	0.26	0.021	0.030	mg/l	1	03/15/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1480	Preparation: _NONE (WETCHEM)		Prepared: 02/18/24 15:18		Analyst: ymt		
Color	ND		3.0	Color Units	1	02/18/24 16:27	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1656	Preparation: _NONE (WETCHEM)		Prepared: 02/21/24 09:49		Analyst: mes		
Alkalinity as CaCO3	330	7.2	20	mg/l	1	02/21/24	
Bicarbonate Alkalinity as HCO3	400	8.8	24	mg/l	1	02/21/24	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/21/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/21/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0072	Preparation: _NONE (METALS)		Prepared: 03/01/24 11:50		Analyst: kjo		
Langelier Index @ 20 C	0.215	-20.0	-10.0	LSI	1	03/01/24	
Langelier Index @ 60 C	0.726	-20.0	-10.0	LSI	1	03/01/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0205	Preparation: _NONE (METALS)		Prepared: 03/04/24 16:30		Analyst: aln		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20053-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0205	Preparation: _NONE (METALS)			Prepared: 03/04/24 16:30		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	32.3	-100	-100	N/A	1	03/04/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)			Prepared: 02/20/24 12:32		Analyst: bel	
Total Dissolved Solids	900	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1585	Preparation: _NONE (WETCHEM)			Prepared: 02/20/24 16:01		Analyst: mes	
pH	7.18	0.10	0.10	pH Units	1	02/20/24 18:02	*

Metals by EPA 200 Series Methods

Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 02/26/24 10:51		Analyst: kvm	
Hardness as CaCO3, Total	501	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2088	Preparation: EPA 200.2			Prepared: 02/26/24 10:51		Analyst: kvm	
Boron, Total	150	1.3	10	ug/l	1	02/28/24	
Calcium, Total	113	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	53.0	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	38	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	38	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090	Preparation: EPA 200.2			Prepared: 02/26/24 13:50		Analyst: tyc	
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.72	0.074	0.40	ug/l	1	02/29/24	
Barium, Total	55	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/29/24	
Iron, Total	30	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	18	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	19	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	2.7	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	3.8	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	110	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	600	0.036	0.20	ug/l	1	02/29/24	

Microbiological Parameters by Standard Methods

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20053-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods (Continued)							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1525		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 16:04		Analyst: rea	
Heterotrophic Plate Count	100	2.0	2.0	MPN/mL	1	02/20/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1524		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 16:04		Analyst: mdc	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	03/23/24	

Sample Results

(Continued)

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20053-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477		Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM	
Sulfate as SO ₄	230	0.72	1.5	mg/l	3	02/19/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20053-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	110	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.28	0.0090	0.10	mg/l	1	02/18/24	
Nitrate as N	1900	22	110	ug/l	1	02/18/24 18:30	
Nitrite as N	ND	29	150	ug/l	1	02/18/24 18:30	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C0178	Preparation: _NONE (METALS)		Prepared: 03/04/24 13:52		Analyst: aln		
Aggressive Index	12.5			AGI	1	03/04/24	
Method: EPA 140.1			Instr: WB07				
Batch ID: W4B1479	Preparation: _NONE (WETCHEM)		Prepared: 02/18/24 15:17		Analyst: ymt		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/18/24 16:37	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0795	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT		
Ammonia as N	0.51	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0713	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 15:26		Analyst: YMT		
TKN	0.11	0.065	0.10	mg/l	1	03/13/24	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0973	Preparation: _NONE (WETCHEM)		Prepared: 03/12/24 20:02		Analyst: rob		
Phosphorus as PO4, Total	0.25	0.021	0.030	mg/l	1	03/15/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1480	Preparation: _NONE (WETCHEM)		Prepared: 02/18/24 15:18		Analyst: ymt		
Color	ND		3.0	Color Units	1	02/18/24 16:27	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1656	Preparation: _NONE (WETCHEM)		Prepared: 02/21/24 09:49		Analyst: mes		
Alkalinity as CaCO3	350	7.2	20	mg/l	1	02/21/24	
Bicarbonate Alkalinity as HCO3	420	8.8	24	mg/l	1	02/21/24	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/21/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/21/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0072	Preparation: _NONE (METALS)		Prepared: 03/01/24 11:50		Analyst: kjo		
Langelier Index @ 20 C	0.562	-20.0	-10.0	LSI	1	03/01/24	
Langelier Index @ 60 C	1.07	-20.0	-10.0	LSI	1	03/01/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0205	Preparation: _NONE (METALS)		Prepared: 03/04/24 16:30		Analyst: aln		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20053-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0205	Preparation: _NONE (METALS)			Prepared: 03/04/24 16:30		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	64.3	-100	-100	N/A	1	03/04/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)			Prepared: 02/20/24 12:32		Analyst: bel	
Total Dissolved Solids	920	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1585	Preparation: _NONE (WETCHEM)			Prepared: 02/20/24 16:01		Analyst: mes	
pH	7.43	0.10	0.10	pH Units	1	02/20/24 18:05	*

Metals by EPA 200 Series Methods

Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 02/26/24 10:51		Analyst: kvm	
Hardness as CaCO3, Total	560	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2088	Preparation: EPA 200.2			Prepared: 02/26/24 10:51		Analyst: kvm	
Boron, Total	140	1.3	10	ug/l	1	02/28/24	
Calcium, Total	134	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	55.0	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	41	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	41	0.0086	0.10	mg/l	1	02/28/24	

Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090	Preparation: EPA 200.2			Prepared: 02/26/24 13:50		Analyst: tyc	
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.72	0.074	0.40	ug/l	1	02/29/24	
Barium, Total	54	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	0.45	0.23	0.50	ug/l	1	02/29/24	J
Iron, Dissolved	ND	3.9	20	ug/l	1	02/29/24	
Iron, Total	ND	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	3.1	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	3.6	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	82	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	800	0.036	0.20	ug/l	1	02/29/24	

Microbiological Parameters by Standard Methods

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20053-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods (Continued)							
Method: SM 9215E			Instr: INC06				
Batch ID: W4B1525	Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 16:04		Analyst: rea		
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/20/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1524	Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 16:04		Analyst: slh		
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/20/24	

Sample Results

(Continued)

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20053-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Sulfate as SO ₄	260	0.72	1.5	mg/l	3	02/19/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20053-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477		Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM	
Chloride, Total	30	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.83	0.0090	0.10	mg/l	1	02/18/24	
Nitrate as N	940	22	110	ug/l	1	02/18/24 18:12	
Nitrite as N	ND	29	150	ug/l	1	02/18/24 18:12	
Sulfate as SO4	55	0.24	0.50	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C0178		Preparation: _NONE (METALS)		Prepared: 03/04/24 13:52		Analyst: aln	
Aggressive Index	12.3			AGI	1	03/04/24	
Method: EPA 140.1				Instr: WB07			
Batch ID: W4B1479		Preparation: _NONE (WETCHEM)		Prepared: 02/18/24 15:17		Analyst: ymt	
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/18/24 16:37	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0795		Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:54		Analyst: YMT	
Ammonia as N	0.91	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0713		Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 15:26		Analyst: YMT	
TKN	0.71	0.065	0.10	mg/l	1	03/13/24	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0973		Preparation: _NONE (WETCHEM)		Prepared: 03/12/24 20:02		Analyst: rob	
Phosphorus as PO4, Total	0.048	0.021	0.030	mg/l	1	03/15/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1480		Preparation: _NONE (WETCHEM)		Prepared: 02/18/24 15:18		Analyst: ymt	
Color	ND		3.0	Color Units	1	02/18/24 16:27	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1656		Preparation: _NONE (WETCHEM)		Prepared: 02/21/24 09:49		Analyst: mes	
Alkalinity as CaCO3	86	7.2	20	mg/l	1	02/21/24	
Bicarbonate Alkalinity as HCO3	76	8.8	24	mg/l	1	02/21/24	
Carbonate Alkalinity as CaCO3	24	7.2	20	mg/l	1	02/21/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/21/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0072		Preparation: _NONE (METALS)		Prepared: 03/01/24 11:50		Analyst: kjo	
Langelier Index @ 20 C	0.539	-20.0	-10.0	LSI	1	03/01/24	
Langelier Index @ 60 C	1.05	-20.0	-10.0	LSI	1	03/01/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20053-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0205	Preparation: _NONE (METALS)			Prepared: 03/04/24 16:30		Analyst: aln	
CCPP, Calcium Carbonate Precip. Pot.	4.67	-100	-100	N/A	1	03/04/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)			Prepared: 02/20/24 12:32		Analyst: bel	
Total Dissolved Solids	200	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1585	Preparation: _NONE (WETCHEM)			Prepared: 02/20/24 16:01		Analyst: mes	
pH	8.60	0.10	0.10	pH Units	1	02/20/24 18:07	*

Metals by EPA 200 Series Methods

Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]			Prepared: 02/26/24 10:51		Analyst: kvm	
Hardness as CaCO3, Total	106	0.121	3.31	mg/l		02/28/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B2088	Preparation: EPA 200.2			Prepared: 02/26/24 10:51		Analyst: kvm	
Boron, Total	78	1.3	10	ug/l	1	02/28/24	
Calcium, Total	24.9	0.0240	0.500	mg/l	1	02/28/24	
Magnesium, Total	10.6	0.0148	0.500	mg/l	1	02/28/24	
Silica as SiO2, Dissolved	8.2	0.0086	0.10	mg/l	1	02/28/24	
Silica as SiO2, Total	8.2	0.0086	0.10	mg/l	1	02/28/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2090	Preparation: EPA 200.2			Prepared: 02/26/24 13:50		Analyst: tyc	
Aluminum, Total	ND	4.4	20	ug/l	1	02/29/24	
Arsenic, Total	0.27	0.074	0.40	ug/l	1	02/29/24	J
Barium, Total	10	0.14	1.0	ug/l	1	02/29/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/29/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/29/24	
Iron, Total	ND	3.9	20	ug/l	1	02/29/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/29/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/29/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/29/24	
Potassium, Total	0.75	0.068	0.50	mg/l	1	02/29/24	
Selenium, Total	0.66	0.067	0.40	ug/l	1	02/29/24	
Sodium, Total	32	0.10	1.0	mg/l	1	02/29/24	
Strontium, Total	130	0.036	0.20	ug/l	1	02/29/24	

Microbiological Parameters by Standard Methods

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20053-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods (Continued)							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1525		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 16:04		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/20/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1524		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/18/24 16:04		Analyst: slh	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/20/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20053-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	170	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	
Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20053-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	ND		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Trip Blank

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20053-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4C0005

Preparation: EPA 5030B

Prepared: 03/01/24 07:12

Analyst: ADM

Surrogate(s)

1,2-Dichlorobenzene-d4	84%	Conc: 42.2	70-130			03/02/24	
4-Bromofluorobenzene	87%	Conc: 43.5	70-130			03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results BSK Associates Laboratory Fresno

Sample: AT-GS-7-S4
 4B20053-01 (Water)

Sampled: 02/18/24 11:30 by Brown & Caldwell

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/09/24	HT1.3
Chlorate	94		5.0	ug/L	1	03/09/24	
<i>Surrogate(s)</i>							
Dichloroacetate	101%		90-115			03/09/24	HT1.3
Dichloroacetate	101%		90-115			03/09/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.64		0.010	mg/L	1	03/01/24	

Sample: AT-GS-7-S7
 4B20053-02 (Water)

Sampled: 02/18/24 11:30 by Brown & Caldwell

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/09/24	HT1.3
Chlorate	230		5.0	ug/L	1	03/09/24	
<i>Surrogate(s)</i>							
Dichloroacetate	97%		90-115			03/09/24	HT1.3
Dichloroacetate	97%		90-115			03/09/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.54		0.010	mg/L	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Sample Results (Continued)

Sample: AT-RES-7-S22
 4B20053-03 (Water)

Sampled: 02/18/24 9:55 by Brown & Caldwell

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0355		Prepared: 03/09/24 01:54				Analyst: DXR
Chlorite	ND		0.0050	mg/L	1	03/09/24	HT1.3
Chlorate	150		5.0	ug/L	1	03/09/24	
<i>Surrogate(s)</i>							
Dichloroacetate	101%		90-115			03/09/24	HT1.3
Dichloroacetate	101%		90-115			03/09/24	
Method: EPA 317.0	Batch ID: AHC0136		Prepared: 03/08/24 18:42				Analyst: DXR
Bromate	ND		1.0	ug/L	1	03/08/24	
General Chemistry							
Method: EPA 300.0	Batch ID: AHC0060		Prepared: 03/01/24 16:00				Analyst: AAS
Bromide	0.34		0.010	mg/L	1	03/01/24	MS1.2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0136 - EPA 317.0										
Blank (AHC0136-BLK1)										
Bromate	ND	1.0	ug/L							
				Prepared & Analyzed: 03/08/24						
LCS (AHC0136-BS1)										
Bromate	10	1.0	ug/L	10.0		103	85-115			
				Prepared & Analyzed: 03/08/24						
LCS Dup (AHC0136-BSD1)										
Bromate	10	1.0	ug/L	10.0		103	85-115	0	10	
				Prepared & Analyzed: 03/08/24						
Matrix Spike (AHC0136-MS1)										
Bromate	9.2	1.0	ug/L	10.0	ND	92	75-125			
				Prepared & Analyzed: 03/08/24						
Matrix Spike Dup (AHC0136-MSD1)										
Bromate	9.1	1.0	ug/L	10.0	ND	91	75-125	1	10	
				Prepared & Analyzed: 03/08/24						
Batch: AHC0355 - EPA 300.1										
Blank (AHC0355-BLK1)										
Chlorate	ND	5.0	ug/L							
Chlorite	ND	0.0050	mg/L							
<i>Surrogate(s)</i>										
Dichloroacetate	0.498		mg/L	0.500		100	90-115			
Dichloroacetate	498		ug/L	500		100	90-115			
LCS (AHC0355-BS1)										
Chlorate	200	5.0	ug/L	200		101	85-115			
Chlorite	0.21	0.0050	mg/L	0.200		104	85-115			
<i>Surrogate(s)</i>										
Dichloroacetate	0.517		mg/L	0.500		103	90-115			
Dichloroacetate	517		ug/L	500		103	90-115			
LCS Dup (AHC0355-BSD1)										
Chlorate	200	5.0	ug/L	200		99	85-115	2	10	
Chlorite	0.21	0.0050	mg/L	0.200		107	85-115	3	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.544		mg/L	0.500		109	90-115			
Dichloroacetate	544		ug/L	500		109	90-115			
Matrix Spike (AHC0355-MS1)										
Chlorate	92	5.0	ug/L	100	ND	92	75-125			
Chlorite	0.098	0.0050	mg/L	0.100	ND	98	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.529		mg/L	0.500		106	90-115			
Dichloroacetate	529		ug/L	500		106	90-115			
Matrix Spike (AHC0355-MS2)										
Chlorate	150	5.0	ug/L	100	97	53	75-125			MS1.0
Chlorite	0.087	0.0050	mg/L	0.100	ND	87	75-125			
<i>Surrogate(s)</i>										
Dichloroacetate	0.546		mg/L	0.500		109	90-115			
Dichloroacetate	546		ug/L	500		109	90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0355 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0355-MSD1) Source: AHC0052-01 Prepared & Analyzed: 03/08/24										
Chlorate	110	5.0	ug/L	100	ND	105	75-125	13	10	MS2.0
Chlorite	0.099	0.0050	mg/L	0.100	ND	99	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.539		mg/L	0.500		108	90-115			
Dichloroacetate	539		ug/L	500		108	90-115			
Matrix Spike Dup (AHC0355-MSD2) Source: SHC0084-02 Prepared & Analyzed: 03/09/24										
Chlorate	150	5.0	ug/L	100	97	53	75-125	0.5	10	MS1.0
Chlorite	0.098	0.0050	mg/L	0.100	ND	98	75-125	11	10	MS2.0
<i>Surrogate(s)</i>										
Dichloroacetate	0.540		mg/L	0.500		108	90-115			
Dichloroacetate	540		ug/L	500		108	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0060 - EPA 300.0										
Blank (AHC0060-BLK1) Prepared & Analyzed: 03/01/24										
Bromide	ND	0.010	mg/L							
LCS (AHC0060-BS1) Prepared & Analyzed: 03/01/24										
Bromide	0.19	0.010	mg/L	0.200		96	90-110			
Matrix Spike (AHC0060-MS1) Source: AHB3708-01 Prepared & Analyzed: 03/01/24										
Bromide	0.096	0.010	mg/L	0.100	ND	96	80-120			
Matrix Spike (AHC0060-MS2) Source: 4B20053-03 Prepared & Analyzed: 03/01/24										
Bromide	0.40	0.010	mg/L	0.100	0.34	60	80-120			MS1.0
Matrix Spike Dup (AHC0060-MSD1) Source: AHB3708-01 Prepared & Analyzed: 03/01/24										
Bromide	0.097	0.010	mg/L	0.100	ND	97	80-120	1	10	
Matrix Spike Dup (AHC0060-MSD2) Source: 4B20053-03 Prepared & Analyzed: 03/01/24										
Bromide	0.41	0.010	mg/L	0.100	0.34	69	80-120	2	10	MS1.0

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1477 - EPA 300.0											
Blank (W4B1477-BLK1)					Prepared & Analyzed: 02/18/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Nitrate as N	ND	22	110	ug/l							
Nitrite as N	ND	29	150	ug/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1477-BS1)					Prepared & Analyzed: 02/18/24						
Chloride, Total	20.2	0.19	0.50	mg/l	20.0		101	90-110			
Fluoride, Total	1.90	0.0090	0.10	mg/l	2.00		95	90-110			
Nitrate as N	2100	22	110	ug/l	2000		105	90-110			
Nitrite as N	1820	29	150	ug/l	2000		91	90-110			
Sulfate as SO4	19.6	0.24	0.50	mg/l	20.0		98	90-110			
Matrix Spike (W4B1477-MS1)					Source: 4B12018-01		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	384	1.9	5.0	mg/l	200	155	115	76-118			
Fluoride, Total	20.4	0.090	1.0	mg/l	20.0	0.197	101	86-107			
Nitrate as N	22400	220	1100	ug/l	20000	ND	112	84-115			
Nitrite as N	21400	290	1500	ug/l	20000	ND	107	87-108			
Sulfate as SO4	1070	2.4	5.0	mg/l	200	565	252	78-111			MS-01
Matrix Spike (W4B1477-MS2)					Source: 4B12018-02		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	387	1.9	5.0	mg/l	200	159	114	76-118			
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.189	100	86-107			
Nitrate as N	22000	220	1100	ug/l	20000	ND	110	84-115			
Nitrite as N	21100	290	1500	ug/l	20000	ND	106	87-108			
Sulfate as SO4	879	2.4	5.0	mg/l	200	467	206	78-111			MS-01
Matrix Spike Dup (W4B1477-MSD1)					Source: 4B12018-01		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	383	1.9	5.0	mg/l	200	155	114	76-118	0.3	20	
Fluoride, Total	20.4	0.090	1.0	mg/l	20.0	0.197	101	86-107	0.1	20	
Nitrate as N	22300	220	1100	ug/l	20000	ND	111	84-115	0.4	20	
Nitrite as N	21100	290	1500	ug/l	20000	ND	106	87-108	1	20	
Sulfate as SO4	1070	2.4	5.0	mg/l	200	565	251	78-111	0.2	20	MS-01
Matrix Spike Dup (W4B1477-MSD2)					Source: 4B12018-02		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	386	1.9	5.0	mg/l	200	159	113	76-118	0.3	20	
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.189	100	86-107	0.1	20	
Nitrate as N	22000	220	1100	ug/l	20000	ND	110	84-115	0.1	20	
Nitrite as N	21000	290	1500	ug/l	20000	ND	105	87-108	0.3	20	
Sulfate as SO4	877	2.4	5.0	mg/l	200	467	205	78-111	0.2	20	MS-01

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1479 - EPA 140.1										
Blank (W4B1479-BLK1) Prepared & Analyzed: 02/18/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1479-DUP1) Source: 4B20053-02 Prepared & Analyzed: 02/18/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1480 - SM 2120B										
LCS (W4B1480-BS1) Prepared & Analyzed: 02/18/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1480-DUP1) Source: 4B20053-01 Prepared & Analyzed: 02/18/24										
Color	ND		3.0	Color Units		ND			10	
Batch: W4B1515 - SM 2540C										
Blank (W4B1515-BLK1) Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	ND	4.0	10	mg/l						
LCS (W4B1515-BS1) Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	801	4.0	10	mg/l	824		97 97-103			
Duplicate (W4B1515-DUP1) Source: 4B15148-01 Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	12300	4.0	10	mg/l		12400		1	10	
Duplicate (W4B1515-DUP2) Source: 4B16032-07 Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	1050	4.0	10	mg/l		1070		2	10	
Batch: W4B1585 - SM 4500H+-B										
LCS (W4B1585-BS1) Prepared & Analyzed: 02/20/24										
pH	6.94	0.10	0.10	pH Units	6.86		101 98.8-101			
Duplicate (W4B1585-DUP1) Source: 4B20048-01 Prepared & Analyzed: 02/20/24										
pH	7.18	0.10	0.10	pH Units		7.10		1	3.1	
Batch: W4B1656 - SM 2320B										
Blank (W4B1656-BLK1) Prepared & Analyzed: 02/21/24										
Alkalinity as CaCO3	ND	7.2	20	mg/l						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l						
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l						
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l						
LCS (W4B1656-BS1) Prepared & Analyzed: 02/21/24										
Alkalinity as CaCO3	86.2	7.2	20	mg/l	87.8		98 94-108			
Bicarbonate Alkalinity as HCO3	105	8.8	24	mg/l	107		98 95-108			
Duplicate (W4B1656-DUP1) Source: 4B20053-01 Prepared & Analyzed: 02/21/24										
Alkalinity as CaCO3	331	7.2	20	mg/l		326		2	15	
Bicarbonate Alkalinity as HCO3	404	8.8	24	mg/l		398		2	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND			200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND			200	
Batch: W4C0713 - EPA 351.2										

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0713 - EPA 351.2 (Continued)										
Blank (W4C0713-BLK1)										
TKN	ND	0.065	0.10	mg/l						
					Prepared: 03/08/24 Analyzed: 03/13/24					
Blank (W4C0713-BLK2)										
TKN	ND	0.065	0.10	mg/l						
					Prepared: 03/08/24 Analyzed: 03/13/24					
LCS (W4C0713-BS1)										
TKN	1.01	0.065	0.10	mg/l	1.00		101 90-110			
					Prepared: 03/08/24 Analyzed: 03/13/24					
LCS (W4C0713-BS2)										
TKN	0.955	0.065	0.10	mg/l	1.00		95 90-110			
					Prepared: 03/08/24 Analyzed: 03/13/24					
Matrix Spike (W4C0713-MS1)										
TKN	6.40	0.26	0.40	mg/l	4.00	3.40	75 90-110			MS-01
					Prepared: 03/08/24 Analyzed: 03/13/24					
Matrix Spike (W4C0713-MS2)										
TKN	16.0	0.52	0.80	mg/l	8.00	14.2	23 90-110			MS-02
					Prepared: 03/08/24 Analyzed: 03/13/24					
Matrix Spike Dup (W4C0713-MSD1)										
TKN	7.51	0.26	0.40	mg/l	4.00	3.40	103 90-110	16	10	R-02
					Prepared: 03/08/24 Analyzed: 03/13/24					
Matrix Spike Dup (W4C0713-MSD2)										
TKN	16.2	0.52	0.80	mg/l	8.00	14.2	26 90-110	1	10	MS-02
					Prepared: 03/08/24 Analyzed: 03/13/24					
Batch: W4C0795 - EPA 350.1										
Blank (W4C0795-BLK1)										
Ammonia as N	ND	0.017	0.10	mg/l						
					Prepared: 03/11/24 Analyzed: 03/12/24					
Blank (W4C0795-BLK2)										
Ammonia as N	ND	0.017	0.10	mg/l						
					Prepared: 03/11/24 Analyzed: 03/12/24					
LCS (W4C0795-BS1)										
Ammonia as N	0.246	0.017	0.10	mg/l	0.250		99 90-110			
					Prepared: 03/11/24 Analyzed: 03/12/24					
LCS (W4C0795-BS2)										
Ammonia as N	0.249	0.017	0.10	mg/l	0.250		99 90-110			
					Prepared: 03/11/24 Analyzed: 03/12/24					
Matrix Spike (W4C0795-MS1)										
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	0.0182	95 90-110			
					Prepared: 03/11/24 Analyzed: 03/12/24					
Matrix Spike (W4C0795-MS2)										
Ammonia as N	0.349	0.017	0.10	mg/l	0.250	0.106	97 90-110			
					Prepared: 03/11/24 Analyzed: 03/12/24					
Matrix Spike Dup (W4C0795-MSD1)										
Ammonia as N	0.255	0.017	0.10	mg/l	0.250	0.0182	95 90-110	0.3	15	
					Prepared: 03/11/24 Analyzed: 03/12/24					
Matrix Spike Dup (W4C0795-MSD2)										
Ammonia as N	0.346	0.017	0.10	mg/l	0.250	0.106	96 90-110	0.9	15	
					Prepared: 03/11/24 Analyzed: 03/12/24					
Batch: W4C0973 - EPA 365.3										
Blank (W4C0973-BLK1)										
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l						
					Prepared: 03/12/24 Analyzed: 03/15/24					
LCS (W4C0973-BS1)										
Phosphorus as PO4, Total	0.593	0.021	0.030	mg/l	0.612		97 90-110			
					Prepared: 03/12/24 Analyzed: 03/15/24					



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0973 - EPA 365.3 (Continued)											
Matrix Spike (W4C0973-MS1)											
Phosphorus as PO4, Total	0.719	0.021	0.030	mg/l	0.612	0.128	97	90-110			
Matrix Spike Dup (W4C0973-MSD1)											
Phosphorus as PO4, Total	0.733	0.021	0.030	mg/l	0.612	0.128	99	90-110	2	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2088 - EPA 200.7									
Blank (W4B2088-BLK1)					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	2.12	1.3	10	ug/l					J
Calcium, Total	ND	0.0240	0.500	mg/l					
Magnesium, Total	ND	0.0148	0.500	mg/l					
Silica as SiO ₂ , Dissolved	ND	0.0086	0.10	mg/l					
Silica as SiO ₂ , Total	ND	0.0086	0.10	mg/l					
LCS (W4B2088-BS1)					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	227	1.3	10	ug/l	200	113	85-115		
Calcium, Total	48.1	0.0240	0.500	mg/l	50.2	96	85-115		
Magnesium, Total	48.1	0.0148	0.500	mg/l	50.2	96	85-115		
Silica as SiO ₂ , Dissolved	44.0	0.0086	0.10	mg/l	43.2	102	85-115		
Silica as SiO ₂ , Total	44.0	0.0086	0.10	mg/l	43.2	102	85-115		
Matrix Spike (W4B2088-MS1) Source: 4B16119-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	380	1.3	10	ug/l	200	148	116	70-130	
Calcium, Total	160	0.0240	0.500	mg/l	50.2	115	91	70-130	
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	53.4	95	70-130	
Silica as SiO ₂ , Dissolved	82.4	0.0086	0.10	mg/l	43.2	37.4	104	70-130	
Silica as SiO ₂ , Total	82.4	0.0086	0.10	mg/l	43.2	38.2	102	70-130	
Matrix Spike (W4B2088-MS2) Source: 4B20048-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	370	1.3	10	ug/l	200	148	111	70-130	
Calcium, Total	155	0.0240	0.500	mg/l	50.2	112	86	70-130	
Magnesium, Total	97.9	0.0148	0.500	mg/l	50.2	52.1	91	70-130	
Silica as SiO ₂ , Dissolved	79.6	0.0086	0.10	mg/l	43.2	37.8	97	70-130	
Silica as SiO ₂ , Total	79.6	0.0086	0.10	mg/l	43.2	37.3	98	70-130	
Matrix Spike Dup (W4B2088-MSD1) Source: 4B16119-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	371	1.3	10	ug/l	200	148	111	70-130	3 30
Calcium, Total	156	0.0240	0.500	mg/l	50.2	115	83	70-130	3 30
Magnesium, Total	98.4	0.0148	0.500	mg/l	50.2	53.4	90	70-130	3 30
Silica as SiO ₂ , Dissolved	80.5	0.0086	0.10	mg/l	43.2	37.4	100	70-130	2 30
Silica as SiO ₂ , Total	80.5	0.0086	0.10	mg/l	43.2	38.2	98	70-130	2 30
Matrix Spike Dup (W4B2088-MSD2) Source: 4B20048-01					Prepared: 02/26/24 Analyzed: 02/28/24				
Boron, Total	382	1.3	10	ug/l	200	148	117	70-130	3 30
Calcium, Total	160	0.0240	0.500	mg/l	50.2	112	96	70-130	3 30
Magnesium, Total	101	0.0148	0.500	mg/l	50.2	52.1	97	70-130	3 30
Silica as SiO ₂ , Dissolved	82.8	0.0086	0.10	mg/l	43.2	37.8	104	70-130	4 30
Silica as SiO ₂ , Total	82.8	0.0086	0.10	mg/l	43.2	37.3	105	70-130	4 30
Batch: W4B2090 - EPA 200.8									
Blank (W4B2090-BLK1)					Prepared: 02/26/24 Analyzed: 02/29/24				
Aluminum, Total	ND	4.4	20	ug/l					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Blank (W4B2090-BLK1)					Prepared: 02/26/24 Analyzed: 02/29/24						
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	ND	3.9	20	ug/l							
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
LCS (W4B2090-BS1)											
					Prepared: 02/26/24 Analyzed: 02/29/24						
Aluminum, Total	47.6	4.4	20	ug/l	50.0		95	85-115			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	48.6	0.14	1.0	ug/l	50.0		97	85-115			
Copper, Total	51.1	0.23	0.50	ug/l	50.0		102	85-115			
Iron, Dissolved	1200	3.9	20	ug/l	1050		115	85-115			
Iron, Total	1200	3.9	20	ug/l	1050		115	85-115			
Lead, Total	49.7	0.083	0.20	ug/l	50.0		99	85-115			
Manganese, Dissolved	50.2	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	50.2	0.23	1.0	ug/l	50.0		100	85-115			
Potassium, Total	2.17	0.068	0.50	mg/l	2.05		106	85-115			
Selenium, Total	49.4	0.067	0.40	ug/l	50.0		99	85-115			
Sodium, Total	2.20	0.10	1.0	mg/l	2.05		107	85-115			
Strontium, Total	49.4	0.036	0.20	ug/l	50.0		99	85-115			
Matrix Spike (W4B2090-MS1)											
					Prepared: 02/26/24 Analyzed: 02/29/24						
Source: 4B16119-03											
Aluminum, Total	46.8	4.4	20	ug/l	50.0	ND	93	70-130			
Arsenic, Total	51.3	0.074	0.40	ug/l	50.0	0.272	102	70-130			
Barium, Total	59.6	0.14	1.0	ug/l	50.0	10.3	99	70-130			
Copper, Total	48.9	0.23	0.50	ug/l	50.0	ND	98	70-130			
Iron, Dissolved	1140	3.9	20	ug/l	1050	ND	109	70-130			
Iron, Total	1140	3.9	20	ug/l	1050	ND	109	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	49.2	0.11	1.0	ug/l	50.0	ND	98	70-130			
Manganese, Total	49.2	0.23	1.0	ug/l	50.0	ND	98	70-130			
Potassium, Total	2.83	0.068	0.50	mg/l	2.05	0.757	101	70-130			
Selenium, Total	49.8	0.067	0.40	ug/l	50.0	0.422	99	70-130			
Sodium, Total	31.0	0.10	1.0	mg/l	2.05	31.0	0.6	70-130			

MS-02

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike (W4B2090-MS1) Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24											
Strontium, Total	187	0.036	0.20	ug/l	50.0	136	101	70-130			
Matrix Spike (W4B2090-MS2) Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24											
Aluminum, Total	46.9	4.4	20	ug/l	50.0	ND	94	70-130			
Arsenic, Total	51.7	0.074	0.40	ug/l	50.0	0.716	102	70-130			
Barium, Total	107	0.14	1.0	ug/l	50.0	55.2	103	70-130			
Copper, Total	48.1	0.23	0.50	ug/l	50.0	ND	96	70-130			
Iron, Dissolved	1170	3.9	20	ug/l	1050	ND	111	70-130			
Iron, Total	1170	3.9	20	ug/l	1050	29.7	108	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	66.2	0.11	1.0	ug/l	50.0	18.1	96	70-130			
Manganese, Total	66.2	0.23	1.0	ug/l	50.0	18.6	95	70-130			
Potassium, Total	4.71	0.068	0.50	mg/l	2.05	2.72	97	70-130			
Selenium, Total	52.2	0.067	0.40	ug/l	50.0	3.78	97	70-130			
Sodium, Total	107	0.10	1.0	mg/l	2.05	109	NR	70-130			MS-02
Strontium, Total	645	0.036	0.20	ug/l	50.0	599	93	70-130			
Matrix Spike Dup (W4B2090-MSD1) Source: 4B16119-03 Prepared: 02/26/24 Analyzed: 02/29/24											
Aluminum, Total	46.6	4.4	20	ug/l	50.0	ND	93	70-130	0.3	30	
Arsenic, Total	50.8	0.074	0.40	ug/l	50.0	0.272	101	70-130	1	30	
Barium, Total	60.0	0.14	1.0	ug/l	50.0	10.3	99	70-130	0.6	30	
Copper, Total	50.1	0.23	0.50	ug/l	50.0	ND	100	70-130	2	30	
Iron, Dissolved	1180	3.9	20	ug/l	1050	ND	113	70-130	4	30	
Iron, Total	1180	3.9	20	ug/l	1050	ND	113	70-130	4	30	
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101	70-130	0.2	30	
Manganese, Dissolved	50.1	0.11	1.0	ug/l	50.0	ND	100	70-130	2	30	
Manganese, Total	50.1	0.23	1.0	ug/l	50.0	ND	100	70-130	2	30	
Potassium, Total	2.88	0.068	0.50	mg/l	2.05	0.757	103	70-130	2	30	
Selenium, Total	49.0	0.067	0.40	ug/l	50.0	0.422	97	70-130	2	30	
Sodium, Total	31.9	0.10	1.0	mg/l	2.05	31.0	48	70-130	3	30	MS-02
Strontium, Total	186	0.036	0.20	ug/l	50.0	136	99	70-130	0.5	30	
Matrix Spike Dup (W4B2090-MSD2) Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24											
Aluminum, Total	47.2	4.4	20	ug/l	50.0	ND	94	70-130	0.5	30	
Arsenic, Total	51.0	0.074	0.40	ug/l	50.0	0.716	100	70-130	1	30	
Barium, Total	106	0.14	1.0	ug/l	50.0	55.2	100	70-130	1	30	
Copper, Total	48.6	0.23	0.50	ug/l	50.0	ND	97	70-130	1	30	
Iron, Dissolved	1200	3.9	20	ug/l	1050	ND	114	70-130	3	30	
Iron, Total	1200	3.9	20	ug/l	1050	29.7	111	70-130	3	30	
Lead, Total	49.7	0.083	0.20	ug/l	50.0	ND	99	70-130	1	30	
Manganese, Dissolved	66.5	0.11	1.0	ug/l	50.0	18.1	97	70-130	0.5	30	
Manganese, Total	66.5	0.23	1.0	ug/l	50.0	18.6	96	70-130	0.5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2090 - EPA 200.8 (Continued)											
Matrix Spike Dup (W4B2090-MSD2) Source: 4B20053-01 Prepared: 02/26/24 Analyzed: 02/29/24											
Potassium, Total	4.75	0.068	0.50	mg/l	2.05	2.72	99	70-130	0.8	30	
Selenium, Total	51.9	0.067	0.40	ug/l	50.0	3.78	96	70-130	0.7	30	
Sodium, Total	107	0.10	1.0	mg/l	2.05	109	NR	70-130	0.02	30	MS-02
Strontium, Total	639	0.036	0.20	ug/l	50.0	599	81	70-130	1	30	

Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1524 - SM 9221B											
Blank (W4B1524-BLK1) Prepared: 02/18/24 Analyzed: 03/23/24											
Total Coliform	ND	1.1	1.1	MPN/100m L							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2											
Blank (W4C0005-BLK1)						Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
Blank (W4C0005-BLK1)						Prepared: 03/01/24 Analyzed: 03/02/24					
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.4			ug/l	50.0		81	70-130			
4-Bromofluorobenzene	41.9			ug/l	50.0		84	70-130			
LCS (W4C0005-BS1)						Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	4.84	0.24	0.50	ug/l	5.00		97	70-130			
1,1,1-Trichloroethane	4.65	0.26	0.50	ug/l	5.00		93	70-130			
1,1,2,2-Tetrachloroethane	4.37	0.20	0.50	ug/l	5.00		87	70-130			
1,1,2-Trichloroethane	4.51	0.19	0.50	ug/l	5.00		90	70-130			
1,1-Dichloroethane	4.22	0.27	0.50	ug/l	5.00		84	70-130			
1,1-Dichloroethene	4.08	0.16	0.50	ug/l	5.00		82	70-130			
1,1-Dichloropropene	4.11	0.14	0.50	ug/l	5.00		82	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)									
LCS (W4C0005-BS1)					Prepared: 03/01/24 Analyzed: 03/02/24				
1,2,3-Trichlorobenzene	5.16	0.40	0.50	ug/l	5.00	103	70-130		
1,2,4-Trichlorobenzene	5.41	0.17	0.50	ug/l	5.00	108	70-130		
1,2,4-Trimethylbenzene	4.59	0.20	0.50	ug/l	5.00	92	70-130		
1,2-Dichloroethane	4.24	0.24	0.50	ug/l	5.00	85	70-130		
1,2-Dichloropropane	3.98	0.13	0.50	ug/l	5.00	80	70-130		
1,3,5-Trimethylbenzene	4.56	0.17	0.50	ug/l	5.00	91	70-130		
1,3-Dichloropropane	4.59	0.27	0.50	ug/l	5.00	92	70-130		
2,2-Dichloropropane	4.36	0.17	0.50	ug/l	5.00	87	70-130		
2-Butanone	3.64	1.5	5.0	ug/l	5.00	73	70-130		J
2-Chlorotoluene	4.92	0.15	0.50	ug/l	5.00	98	70-130		
2-Hexanone	4.46	1.2	5.0	ug/l	5.00	89	70-130		J
4-Chlorotoluene	4.90	0.15	0.50	ug/l	5.00	98	70-130		
4-Methyl-2-pentanone	4.28	1.8	5.0	ug/l	5.00	86	70-130		J
Acetone	40.2	3.1	5.0	ug/l	50.0	80	70-130		
Benzene	4.36	0.15	0.50	ug/l	5.00	87	70-130		
Bromobenzene	5.09	0.15	0.50	ug/l	5.00	102	70-130		
Bromochloromethane	3.94	0.15	0.50	ug/l	5.00	79	70-130		
Bromodichloromethane	4.31	0.24	0.50	ug/l	5.00	86	70-130		
Bromoform	5.43	0.38	0.50	ug/l	5.00	109	70-130		
Bromomethane	4.36	0.27	0.50	ug/l	5.00	87	70-130		
Carbon tetrachloride	4.79	0.27	0.50	ug/l	5.00	96	70-130		
Chlorobenzene	5.53	0.15	0.50	ug/l	5.00	111	70-130		
Chloroethane	3.99	0.17	0.50	ug/l	5.00	80	70-130		
Chloroform	4.34	0.27	0.50	ug/l	5.00	87	70-130		
Chloromethane	3.41	0.23	0.50	ug/l	5.00	68	70-130		Q-ME
cis-1,2-Dichloroethene	4.09	0.25	0.50	ug/l	5.00	82	70-130		
cis-1,3-Dichloropropene	4.58	0.30	0.50	ug/l	5.00	92	70-130		
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00	99	70-130		
Dibromomethane	4.48	0.20	0.50	ug/l	5.00	90	70-130		
Dichlorodifluoromethane (Freon 12)	4.07	0.45	0.50	ug/l	5.00	81	70-130		
Di-isopropyl ether	15.4	1.1	2.0	ug/l	20.0	77	70-130		
Ethyl tert-butyl ether	17.8	1.0	2.0	ug/l	20.0	89	70-130		
Ethylbenzene	4.51	0.21	0.50	ug/l	5.00	90	70-130		
Freon 113	4.45	1.5	5.0	ug/l	5.00	89	70-130		J
Hexachlorobutadiene	5.53	0.40	0.50	ug/l	5.00	111	70-130		
Isopropylbenzene	4.64	0.18	0.50	ug/l	5.00	93	70-130		
m,p-Xylene	4.45	0.33	0.50	ug/l	5.00	89	70-130		
m-Dichlorobenzene	4.82	0.14	0.50	ug/l	5.00	96	70-130		
Methyl tert-butyl ether (MTBE)	18.2	0.94	2.0	ug/l	20.0	91	70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)										
LCS (W4C0005-BS1)					Prepared: 03/01/24 Analyzed: 03/02/24					
Methylene chloride	3.76	0.30	0.50	ug/l	5.00	75	70-130			
Naphthalene	4.75	0.35	0.50	ug/l	5.00	95	70-130			
n-Butylbenzene	4.56	0.29	0.50	ug/l	5.00	91	70-130			
n-Propylbenzene	4.36	0.18	0.50	ug/l	5.00	87	70-130			
o-Dichlorobenzene	4.95	0.19	0.50	ug/l	5.00	99	70-130			
o-Xylene	4.72	0.20	0.50	ug/l	5.00	94	70-130			
p-Dichlorobenzene	5.01	0.18	0.50	ug/l	5.00	100	70-130			
p-Isopropyltoluene	4.55	0.25	0.50	ug/l	5.00	91	70-130			
sec-Butylbenzene	4.40	0.24	0.50	ug/l	5.00	88	70-130			
Styrene	4.75	0.19	0.50	ug/l	5.00	95	70-130			
Tert-amyl methyl ether	18.6	0.59	2.0	ug/l	20.0	93	70-130			
tert-Butylbenzene	4.70	0.18	0.50	ug/l	5.00	94	70-130			
Tetrachloroethene	5.35	0.18	0.50	ug/l	5.00	107	70-130			
Toluene	4.51	0.29	0.50	ug/l	5.00	90	70-130			
trans-1,2-Dichloroethene	4.12	0.26	0.50	ug/l	5.00	82	70-130			
trans-1,3-Dichloropropene	4.86	0.32	0.50	ug/l	5.00	97	70-130			
Trichloroethene	4.70	0.18	0.50	ug/l	5.00	94	70-130			
Trichlorofluoromethane	4.67	0.18	0.50	ug/l	5.00	93	70-130			
Vinyl chloride	3.73	0.18	0.50	ug/l	5.00	75	70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0	93	70-130			
4-Bromofluorobenzene	46.6			ug/l	50.0	93	70-130			
LCS Dup (W4C0005-BSD1)					Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	4.57	0.24	0.50	ug/l	5.00	91	70-130	6	30	
1,1,1-Trichloroethane	4.51	0.26	0.50	ug/l	5.00	90	70-130	3	30	
1,1,2,2-Tetrachloroethane	4.18	0.20	0.50	ug/l	5.00	84	70-130	4	30	
1,1,2-Trichloroethane	4.29	0.19	0.50	ug/l	5.00	86	70-130	5	30	
1,1-Dichloroethane	4.29	0.27	0.50	ug/l	5.00	86	70-130	2	30	
1,1-Dichloroethene	4.03	0.16	0.50	ug/l	5.00	81	70-130	1	30	
1,1-Dichloropropene	4.02	0.14	0.50	ug/l	5.00	80	70-130	2	30	
1,2,3-Trichlorobenzene	4.94	0.40	0.50	ug/l	5.00	99	70-130	4	30	
1,2,4-Trichlorobenzene	5.48	0.17	0.50	ug/l	5.00	110	70-130	1	30	
1,2,4-Trimethylbenzene	4.32	0.20	0.50	ug/l	5.00	86	70-130	6	30	
1,2-Dichloroethane	4.30	0.24	0.50	ug/l	5.00	86	70-130	1	30	
1,2-Dichloropropane	3.98	0.13	0.50	ug/l	5.00	80	70-130	0.1	30	
1,3,5-Trimethylbenzene	4.20	0.17	0.50	ug/l	5.00	84	70-130	8	30	
1,3-Dichloropropane	4.35	0.27	0.50	ug/l	5.00	87	70-130	5	30	
2,2-Dichloropropane	3.77	0.17	0.50	ug/l	5.00	75	70-130	15	30	
2-Butanone	3.59	1.5	5.0	ug/l	5.00	72	70-130	1	30	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
LCS Dup (W4C0005-BSD1)						Prepared: 03/01/24 Analyzed: 03/02/24					
2-Chlorotoluene	4.65	0.15	0.50	ug/l	5.00	93	70-130	6	30		
2-Hexanone	4.32	1.2	5.0	ug/l	5.00	86	70-130	3	30		J
4-Chlorotoluene	4.57	0.15	0.50	ug/l	5.00	91	70-130	7	30		
4-Methyl-2-pentanone	4.17	1.8	5.0	ug/l	5.00	83	70-130	2	30		J
Acetone	37.6	3.1	5.0	ug/l	50.0	75	70-130	7	30		
Benzene	4.35	0.15	0.50	ug/l	5.00	87	70-130	0.3	30		
Bromobenzene	4.74	0.15	0.50	ug/l	5.00	95	70-130	7	30		
Bromochloromethane	4.02	0.15	0.50	ug/l	5.00	80	70-130	2	30		
Bromodichloromethane	4.25	0.24	0.50	ug/l	5.00	85	70-130	1	30		
Bromoform	5.25	0.38	0.50	ug/l	5.00	105	70-130	4	30		
Bromomethane	4.32	0.27	0.50	ug/l	5.00	86	70-130	0.9	30		
Carbon tetrachloride	4.59	0.27	0.50	ug/l	5.00	92	70-130	4	30		
Chlorobenzene	5.32	0.15	0.50	ug/l	5.00	106	70-130	4	30		
Chloroethane	3.91	0.17	0.50	ug/l	5.00	78	70-130	2	30		
Chloroform	4.33	0.27	0.50	ug/l	5.00	87	70-130	0.2	30		
Chloromethane	3.37	0.23	0.50	ug/l	5.00	67	70-130	1	30		Q-ME
cis-1,2-Dichloroethene	4.11	0.25	0.50	ug/l	5.00	82	70-130	0.5	30		
cis-1,3-Dichloropropene	4.30	0.30	0.50	ug/l	5.00	86	70-130	6	30		
Dibromochloromethane	4.74	0.20	0.50	ug/l	5.00	95	70-130	4	30		
Dibromomethane	4.42	0.20	0.50	ug/l	5.00	88	70-130	1	30		
Dichlorodifluoromethane (Freon 12)	3.83	0.45	0.50	ug/l	5.00	77	70-130	6	30		
Di-isopropyl ether	15.2	1.1	2.0	ug/l	20.0	76	70-130	2	30		
Ethyl tert-butyl ether	17.1	1.0	2.0	ug/l	20.0	86	70-130	4	30		
Ethylbenzene	4.24	0.21	0.50	ug/l	5.00	85	70-130	6	30		
Freon 113	4.44	1.5	5.0	ug/l	5.00	89	70-130	0.3	30		J
Hexachlorobutadiene	5.29	0.40	0.50	ug/l	5.00	106	70-130	4	30		
Isopropylbenzene	4.33	0.18	0.50	ug/l	5.00	87	70-130	7	30		
m,p-Xylene	4.14	0.33	0.50	ug/l	5.00	83	70-130	7	30		
m-Dichlorobenzene	4.68	0.14	0.50	ug/l	5.00	94	70-130	3	30		
Methyl tert-butyl ether (MTBE)	17.5	0.94	2.0	ug/l	20.0	88	70-130	4	30		
Methylene chloride	3.91	0.30	0.50	ug/l	5.00	78	70-130	4	30		
Naphthalene	4.68	0.35	0.50	ug/l	5.00	94	70-130	1	30		
n-Butylbenzene	4.33	0.29	0.50	ug/l	5.00	87	70-130	5	30		
n-Propylbenzene	4.06	0.18	0.50	ug/l	5.00	81	70-130	7	30		
o-Dichlorobenzene	4.72	0.19	0.50	ug/l	5.00	94	70-130	5	30		
o-Xylene	4.45	0.20	0.50	ug/l	5.00	89	70-130	6	30		
p-Dichlorobenzene	4.76	0.18	0.50	ug/l	5.00	95	70-130	5	30		
p-Isopropyltoluene	4.36	0.25	0.50	ug/l	5.00	87	70-130	4	30		
sec-Butylbenzene	4.18	0.24	0.50	ug/l	5.00	84	70-130	5	30		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 04/08/2024 08:11

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
LCS Dup (W4C0005-BSD1)											
					Prepared: 03/01/24 Analyzed: 03/02/24						
Styrene	4.47	0.19	0.50	ug/l	5.00		89	70-130	6	30	
Tert-amyl methyl ether	17.5	0.59	2.0	ug/l	20.0		87	70-130	6	30	
tert-Butylbenzene	4.43	0.18	0.50	ug/l	5.00		89	70-130	6	30	
Tetrachloroethene	5.04	0.18	0.50	ug/l	5.00		101	70-130	6	30	
Toluene	4.24	0.29	0.50	ug/l	5.00		85	70-130	6	30	
trans-1,2-Dichloroethene	4.17	0.26	0.50	ug/l	5.00		83	70-130	1	30	
trans-1,3-Dichloropropene	4.56	0.32	0.50	ug/l	5.00		91	70-130	6	30	
Trichloroethene	4.63	0.18	0.50	ug/l	5.00		93	70-130	2	30	
Trichlorofluoromethane	4.36	0.18	0.50	ug/l	5.00		87	70-130	7	30	
Vinyl chloride	3.76	0.18	0.50	ug/l	5.00		75	70-130	0.6	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.6			ug/l	50.0		91	70-130			
4-Bromofluorobenzene	46.0			ug/l	50.0		92	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:

04/08/2024 08:11

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Assuming source temperature @20C for calculation.
HT1.3	Holding time exceeded. Sample was analyzed past the holding time.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
MS1.2	Matrix spike recovery exceeds lower control limit. Reported results for parent matrix should be considered estimated due to matrix interferences.
MS2.0	MS/MSD RPD exceeds control limit. No material impact as both sets of recovery data meet control criteria.
Q-ME	Acceptable QC with marginal exceedance
R-02	The RPD was outside of QC acceptance limits due to possible matrix interference.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	

Work Orders: 4B20054

Report Date: 3/28/2024

Received Date: 2/18/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

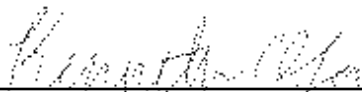
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/18/24 with the Chain-of-Custody document. The samples were received in good condition, at 12.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-7-S4	Brown & Caldwell	4B20054-01	Water	02/18/24 11:30	
AT-GS-7-S7	Brown & Caldwell	4B20054-02	Water	02/18/24 11:30	
AT-RES-7-S22	Brown & Caldwell	4B20054-03	Water	02/18/24 09:55	
AT-GAC-7-1-LEAD	Brown & Caldwell	4B20054-04	Water	02/18/24 13:40	
AT-GAC-7-3-LEAD	Brown & Caldwell	4B20054-05	Water	02/18/24 13:40	

[TOC_1]Not Certified Analyses Summary[TOC]

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3			⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-7-S4

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20054-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B							
Batch ID: W4C0330	Preparation: _NONE (TOC/TOX)						Analyst: rem
Total Organic Carbon (TOC)	0.54	0.19	0.30	mg/l	1	03/06/24	

Sample Results

Sample: AT-GS-7-S7

Sampled: 02/18/24 11:30 by Brown & Caldwell

4B20054-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B							
Batch ID: W4C0330	Preparation: _NONE (TOC/TOX)						Analyst: rem
Total Organic Carbon (TOC)	0.58	0.19	0.30	mg/l	1	03/06/24	

Sample Results

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20054-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B							
Batch ID: W4C0330	Preparation: _NONE (TOC/TOX)						Analyst: rem
Total Organic Carbon (TOC)	0.26	0.19	0.30	mg/l	1	03/06/24	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-1-LEAD

Sampled: 02/18/24 13:40 by Brown & Caldwell

4B20054-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.85	0.028	0.070	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	94%	Conc: 9.19	70-130			02/29/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938	Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM		
1,2,3-Trichloropropane	0.015	0.0012	0.0050	ug/l	1	02/25/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4C0710	Preparation: EPA 537/SPE		Prepared: 03/08/24 14:36		Analyst: ajc		
11Cl-PF3OUdS	ND	0.50	1.8	ng/l	1	03/13/24	O-05
9Cl-PF3ONS	ND	0.47	1.8	ng/l	1	03/13/24	O-05
ADONA	ND	0.49	1.8	ng/l	1	03/13/24	O-05
EtFOSAA	ND	0.42	1.8	ng/l	1	03/13/24	O-05
HFPO-DA	ND	0.77	1.8	ng/l	1	03/13/24	O-05
MeFOSAA	ND	0.51	1.8	ng/l	1	03/13/24	O-05
PFBS	1.3	0.51	1.8	ng/l	1	03/13/24	O-05, J
PFDA	ND	0.40	1.8	ng/l	1	03/13/24	O-05
PFDoA	ND	0.58	1.8	ng/l	1	03/13/24	O-05
PFHpA	0.58	0.47	1.8	ng/l	1	03/13/24	O-05, J
PFHxA	2.0	0.43	1.8	ng/l	1	03/13/24	O-05
PFHxS	1.3	0.52	1.8	ng/l	1	03/13/24	O-05, J
PFNA	ND	0.46	1.8	ng/l	1	03/13/24	O-05
PFOA	ND	0.59	1.8	ng/l	1	03/13/24	O-05
PFOS	ND	0.47	1.8	ng/l	1	03/13/24	O-05
PFTeDA	ND	0.40	1.8	ng/l	1	03/13/24	O-05
PFTTrDA	ND	0.37	1.8	ng/l	1	03/13/24	O-05
PFUnA	ND	0.42	1.8	ng/l	1	03/13/24	O-05
<i>Surrogate(s)</i>							
13C2-PFDA	109%	Conc: 38.4	70-130			03/13/24	
13C2-PFHxA	91%	Conc: 32.2	70-130			03/13/24	
d5-EtFOSAA	100%	Conc: 142	70-130			03/13/24	
HFPO-DA-13C3	88%	Conc: 31.1	70-130			03/13/24	

Volatile Organic Compounds by P&T and GC/MS

4B20054

Page 4 of 21

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-1-LEAD

Sampled: 02/18/24 13:40 by Brown & Caldwell

4B20054-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	0.33	0.27	0.50	ug/l	1	03/02/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	ND	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	0.76	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	3.6	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-1-LEAD

Sampled: 02/18/24 13:40 by Brown & Caldwell

4B20054-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
Chloromethane	0.32	0.23	0.50	ug/l	1	03/02/24	J
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	3.6		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	03/02/24	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-1-LEAD

Sampled: 02/18/24 13:40 by Brown & Caldwell

4B20054-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B			Prepared: 03/01/24 07:12		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.3	70-130			03/02/24	
4-Bromofluorobenzene	86%	Conc: 43.1	70-130			03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-3-LEAD

Sampled: 02/18/24 13:40 by Brown & Caldwell

4B20054-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.045	0.028	0.070	ug/l	1	02/29/24	J
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	93%	Conc: 9.39	70-130			02/29/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938	Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM		
1,2,3-Trichloropropane	0.013	0.0012	0.0050	ug/l	1	02/25/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4C0710	Preparation: EPA 537/SPE		Prepared: 03/08/24 14:36		Analyst: ajc		
11Cl-PF3OUdS	ND	0.51	1.8	ng/l	1	03/13/24	O-05
9Cl-PF3ONS	ND	0.48	1.8	ng/l	1	03/13/24	O-05
ADONA	ND	0.50	1.8	ng/l	1	03/13/24	O-05
EtFOSAA	ND	0.44	1.8	ng/l	1	03/13/24	O-05
HFPO-DA	ND	0.79	1.8	ng/l	1	03/13/24	O-05
MeFOSAA	ND	0.52	1.8	ng/l	1	03/13/24	O-05
PFBS	1.8	0.52	1.8	ng/l	1	03/13/24	O-05, J
PFDA	ND	0.41	1.8	ng/l	1	03/13/24	O-05
PFDoA	ND	0.60	1.8	ng/l	1	03/13/24	O-05
PFHpA	0.70	0.49	1.8	ng/l	1	03/13/24	O-05, J
PFHxA	2.5	0.44	1.8	ng/l	1	03/13/24	O-05
PFHxS	1.6	0.54	1.8	ng/l	1	03/13/24	O-05, J
PFNA	ND	0.47	1.8	ng/l	1	03/13/24	O-05
PFOA	0.65	0.61	1.8	ng/l	1	03/13/24	O-05, J
PFOS	ND	0.48	1.8	ng/l	1	03/13/24	O-05
PFTeDA	ND	0.41	1.8	ng/l	1	03/13/24	O-05
PFTTrDA	ND	0.38	1.8	ng/l	1	03/13/24	O-05
PFUnA	ND	0.43	1.8	ng/l	1	03/13/24	O-05
<i>Surrogate(s)</i>							
13C2-PFDA	116%	Conc: 42.0	70-130			03/13/24	
13C2-PFHxA	110%	Conc: 40.0	70-130			03/13/24	
d5-EtFOSAA	106%	Conc: 155	70-130			03/13/24	
HFPO-DA-13C3	104%	Conc: 37.8	70-130			03/13/24	

Volatile Organic Compounds by P&T and GC/MS

4B20054

Page 8 of 21

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-3-LEAD

Sampled: 02/18/24 13:40 by Brown & Caldwell

4B20054-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B		Prepared: 03/01/24 07:12		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	03/02/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	03/02/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	03/02/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	03/02/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	03/02/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	03/02/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	03/02/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	03/02/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	03/02/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	03/02/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	03/02/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	03/02/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	03/02/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	03/02/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	03/02/24	
2-Butanone	ND	1.5	5.0	ug/l	1	03/02/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	03/02/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	03/02/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	03/02/24	
Acetone	41	3.1	5.0	ug/l	1	03/02/24	
Benzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	03/02/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	03/02/24	
Bromoform	ND	0.38	0.50	ug/l	1	03/02/24	
Bromomethane	ND	0.27	0.50	ug/l	1	03/02/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	03/02/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	03/02/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	03/02/24	
Chloroethane	ND	0.17	0.50	ug/l	1	03/02/24	
Chloroform	ND	0.27	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-3-LEAD

Sampled: 02/18/24 13:40 by Brown & Caldwell

4B20054-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4C0005

Preparation: EPA 5030B

Prepared: 03/01/24 07:12

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	03/02/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	03/02/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	03/02/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	03/02/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	03/02/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	03/02/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	03/02/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	03/02/24	
Freon 113	ND	1.5	5.0	ug/l	1	03/02/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	03/02/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	03/02/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	03/02/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	03/02/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	03/02/24	
Naphthalene	ND	0.35	0.50	ug/l	1	03/02/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	03/02/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	03/02/24	
o-Xylene	ND	0.20	0.50	ug/l	1	03/02/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	03/02/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	03/02/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	03/02/24	
Styrene	ND	0.19	0.50	ug/l	1	03/02/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	03/02/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	03/02/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
THMs, Total	ND		0.50	ug/l	1	03/02/24	
Toluene	ND	0.29	0.50	ug/l	1	03/02/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	03/02/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	03/02/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	03/02/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	03/02/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/28/2024 12:21

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-7-3-LEAD

Sampled: 02/18/24 13:40 by Brown & Caldwell

4B20054-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4C0005		Preparation: EPA 5030B			Prepared: 03/01/24 07:12		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	03/02/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 40.9	70-130			03/02/24	
4-Bromofluorobenzene	85%	Conc: 42.3	70-130			03/02/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1944 - EPA 522											
Blank (W4B1944-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.21			ug/l	10.0		92	70-130			
LCS (W4B1944-BS1)											
1,4-Dioxane	0.0515	0.028	0.070	ug/l	0.0600		86	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.39			ug/l	10.0		94	70-130			
LCS Dup (W4B1944-BSD1)											
1,4-Dioxane	0.0600	0.028	0.070	ug/l	0.0600		100	50-150	15	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.73			ug/l	10.0		97	70-130			

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0330 - SM 5310B											
Blank (W4C0330-BLK1)											
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							
LCS (W4C0330-BS1)											
Total Organic Carbon (TOC)	0.890	0.19	0.30	mg/l	1.00		89	85-115			
Matrix Spike (W4C0330-MS1)											
Total Organic Carbon (TOC)	39.8	0.19	0.30	mg/l	5.00	14.2	513	76-115			MS-02
Matrix Spike Dup (W4C0330-MSD1)											
Total Organic Carbon (TOC)	36.9	0.19	0.30	mg/l	5.00	14.2	455	76-115	8	20	MS-02

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1938 - SRL 524M-TCP											
Blank (W4B1938-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
LCS (W4B1938-BS1)											
1,2,3-Trichloropropane	0.0218	0.0012	0.0050	ug/l	0.0200		109	80-120			
LCS Dup (W4B1938-BSD1)											
1,2,3-Trichloropropane	0.0217	0.0012	0.0050	ug/l	0.0200		109	80-120	0.4	20	
Duplicate (W4B1938-DUP1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4C0710 - EPA 537.1										
Blank (W4C0710-BLK1)					Prepared: 03/08/24 Analyzed: 03/13/24					
11CI-PF3OUdS	ND	0.56	2.0	ng/l						
9CI-PF3ONS	ND	0.53	2.0	ng/l						
ADONA	ND	0.55	2.0	ng/l						
EtFOSAA	ND	0.48	2.0	ng/l						
HFPO-DA	ND	0.87	2.0	ng/l						
MeFOSAA	ND	0.58	2.0	ng/l						
PFBS	ND	0.58	2.0	ng/l						
PFDA	ND	0.45	2.0	ng/l						
PFDoA	ND	0.66	2.0	ng/l						
PFHpA	ND	0.53	2.0	ng/l						
PFHxA	ND	0.49	2.0	ng/l						
PFHxS	ND	0.59	2.0	ng/l						
PFNA	ND	0.52	2.0	ng/l						
PFOA	ND	0.67	2.0	ng/l						
PFOS	ND	0.53	2.0	ng/l						
PFTeDA	ND	0.45	2.0	ng/l						
PFTrDA	ND	0.42	2.0	ng/l						
PFUnA	ND	0.48	2.0	ng/l						
<i>Surrogate(s)</i>										
13C2-PFDA	43.4			ng/l	40.0		108	70-130		
13C2-PFHxA	45.0			ng/l	40.0		113	70-130		
d5-EtFOSAA	161			ng/l	160		101	70-130		
HFPO-DA-13C3	42.9			ng/l	40.0		107	70-130		
LCS (W4C0710-BS1)					Prepared: 03/08/24 Analyzed: 03/13/24					
11CI-PF3OUdS	77.3	0.56	2.0	ng/l	80.0		97	70-130		
9CI-PF3ONS	77.9	0.53	2.0	ng/l	80.0		97	70-130		
ADONA	81.9	0.55	2.0	ng/l	80.0		102	70-130		
EtFOSAA	78.4	0.48	2.0	ng/l	80.0		98	70-130		
HFPO-DA	79.5	0.87	2.0	ng/l	80.0		99	70-130		
MeFOSAA	79.0	0.58	2.0	ng/l	80.0		99	70-130		
PFBS	80.1	0.58	2.0	ng/l	80.0		100	70-130		
PFDA	80.2	0.45	2.0	ng/l	80.0		100	70-130		
PFDoA	78.6	0.66	2.0	ng/l	80.0		98	70-130		
PFHpA	83.9	0.53	2.0	ng/l	80.0		105	70-130		
PFHxA	81.8	0.49	2.0	ng/l	80.0		102	70-130		
PFHxS	80.8	0.59	2.0	ng/l	80.0		101	70-130		
PFNA	83.2	0.52	2.0	ng/l	80.0		104	70-130		
PFOA	81.5	0.67	2.0	ng/l	80.0		102	70-130		
PFOS	80.3	0.53	2.0	ng/l	80.0		100	70-130		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0710 - EPA 537.1 (Continued)										
LCS (W4C0710-BS1)					Prepared: 03/08/24 Analyzed: 03/13/24					
PFTeDA	73.8	0.45	2.0	ng/l	80.0		92 70-130			
PFTTrDA	78.3	0.42	2.0	ng/l	80.0		98 70-130			
PFUnA	80.6	0.48	2.0	ng/l	80.0		101 70-130			
<i>Surrogate(s)</i>										
13C2-PFDA	46.0			ng/l	40.0		115 70-130			
13C2-PFHxA	44.8			ng/l	40.0		112 70-130			
d5-EtFOSAA	163			ng/l	160		102 70-130			
HFPO-DA-13C3	43.9			ng/l	40.0		110 70-130			
LCS Dup (W4C0710-BSD1)					Prepared: 03/08/24 Analyzed: 03/13/24					
11Cl-PF3OUdS	78.9	0.56	2.0	ng/l	80.0		99 70-130	2	30	
9Cl-PF3ONS	80.0	0.53	2.0	ng/l	80.0		100 70-130	3	30	
ADONA	81.7	0.55	2.0	ng/l	80.0		102 70-130	0.2	30	
EtFOSAA	79.2	0.48	2.0	ng/l	80.0		99 70-130	1	30	
HFPO-DA	78.7	0.87	2.0	ng/l	80.0		98 70-130	1	30	
MeFOSAA	78.3	0.58	2.0	ng/l	80.0		98 70-130	0.9	30	
PFBS	83.8	0.58	2.0	ng/l	80.0		105 70-130	4	30	
PFDA	78.6	0.45	2.0	ng/l	80.0		98 70-130	2	30	
PFDoA	77.5	0.66	2.0	ng/l	80.0		97 70-130	1	30	
PFHpA	83.4	0.53	2.0	ng/l	80.0		104 70-130	0.6	30	
PFHxA	80.9	0.49	2.0	ng/l	80.0		101 70-130	1	30	
PFHxS	84.3	0.59	2.0	ng/l	80.0		105 70-130	4	30	
PFNA	80.8	0.52	2.0	ng/l	80.0		101 70-130	3	30	
PFOA	82.6	0.67	2.0	ng/l	80.0		103 70-130	1	30	
PFOS	80.4	0.53	2.0	ng/l	80.0		101 70-130	0.2	30	
PFTeDA	69.6	0.45	2.0	ng/l	80.0		87 70-130	6	30	
PFTTrDA	77.8	0.42	2.0	ng/l	80.0		97 70-130	0.5	30	
PFUnA	80.5	0.48	2.0	ng/l	80.0		101 70-130	0.1	30	
<i>Surrogate(s)</i>										
13C2-PFDA	44.6			ng/l	40.0		111 70-130			
13C2-PFHxA	43.9			ng/l	40.0		110 70-130			
d5-EtFOSAA	160			ng/l	160		100 70-130			
HFPO-DA-13C3	43.8			ng/l	40.0		109 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2											
Blank (W4C0005-BLK1)						Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
Blank (W4C0005-BLK1)						Prepared: 03/01/24 Analyzed: 03/02/24					
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND	0.33	0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	40.4			ug/l	50.0		81	70-130			
4-Bromofluorobenzene	41.9			ug/l	50.0		84	70-130			
LCS (W4C0005-BS1)						Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	4.84	0.24	0.50	ug/l	5.00		97	70-130			
1,1,1-Trichloroethane	4.65	0.26	0.50	ug/l	5.00		93	70-130			
1,1,2,2-Tetrachloroethane	4.37	0.20	0.50	ug/l	5.00		87	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
LCS (W4C0005-BS1)						Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,2-Trichloroethane	4.51	0.19	0.50	ug/l	5.00		90	70-130			
1,1-Dichloroethane	4.22	0.27	0.50	ug/l	5.00		84	70-130			
1,1-Dichloroethene	4.08	0.16	0.50	ug/l	5.00		82	70-130			
1,1-Dichloropropene	4.11	0.14	0.50	ug/l	5.00		82	70-130			
1,2,3-Trichlorobenzene	5.16	0.40	0.50	ug/l	5.00		103	70-130			
1,2,3-Trichloropropane	4.76	0.22	0.50	ug/l	5.00		95	70-130			
1,2,4-Trichlorobenzene	5.41	0.17	0.50	ug/l	5.00		108	70-130			
1,2,4-Trimethylbenzene	4.59	0.20	0.50	ug/l	5.00		92	70-130			
1,2-Dichloroethane	4.24	0.24	0.50	ug/l	5.00		85	70-130			
1,2-Dichloropropane	3.98	0.13	0.50	ug/l	5.00		80	70-130			
1,3,5-Trimethylbenzene	4.56	0.17	0.50	ug/l	5.00		91	70-130			
1,3-Dichloropropane	4.59	0.27	0.50	ug/l	5.00		92	70-130			
2,2-Dichloropropane	4.36	0.17	0.50	ug/l	5.00		87	70-130			
2-Butanone	3.64	1.5	5.0	ug/l	5.00		73	70-130			J
2-Chlorotoluene	4.92	0.15	0.50	ug/l	5.00		98	70-130			
2-Hexanone	4.46	1.2	5.0	ug/l	5.00		89	70-130			J
4-Chlorotoluene	4.90	0.15	0.50	ug/l	5.00		98	70-130			
4-Methyl-2-pentanone	4.28	1.8	5.0	ug/l	5.00		86	70-130			J
Acetone	40.2	3.1	5.0	ug/l	50.0		80	70-130			
Benzene	4.36	0.15	0.50	ug/l	5.00		87	70-130			
Bromobenzene	5.09	0.15	0.50	ug/l	5.00		102	70-130			
Bromochloromethane	3.94	0.15	0.50	ug/l	5.00		79	70-130			
Bromodichloromethane	4.31	0.24	0.50	ug/l	5.00		86	70-130			
Bromoform	5.43	0.38	0.50	ug/l	5.00		109	70-130			
Bromomethane	4.36	0.27	0.50	ug/l	5.00		87	70-130			
Carbon Disulfide	4.13	0.25	0.50	ug/l	5.00		83	70-130			
Carbon tetrachloride	4.79	0.27	0.50	ug/l	5.00		96	70-130			
Chlorobenzene	5.53	0.15	0.50	ug/l	5.00		111	70-130			
Chloroethane	3.99	0.17	0.50	ug/l	5.00		80	70-130			
Chloroform	4.34	0.27	0.50	ug/l	5.00		87	70-130			
Chloromethane	3.41	0.23	0.50	ug/l	5.00		68	70-130			Q-ME
cis-1,2-Dichloroethene	4.09	0.25	0.50	ug/l	5.00		82	70-130			
cis-1,3-Dichloropropene	4.58	0.30	0.50	ug/l	5.00		92	70-130			
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00		99	70-130			
Dibromomethane	4.48	0.20	0.50	ug/l	5.00		90	70-130			
Dichlorodifluoromethane (Freon 12)	4.07	0.45	0.50	ug/l	5.00		81	70-130			
Di-isopropyl ether	15.4	1.1	2.0	ug/l	20.0		77	70-130			
Ethyl tert-butyl ether	17.8	1.0	2.0	ug/l	20.0		89	70-130			
Ethylbenzene	4.51	0.21	0.50	ug/l	5.00		90	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
LCS (W4C0005-BS1)						Prepared: 03/01/24 Analyzed: 03/02/24					
Freon 113	4.45	1.5	5.0	ug/l	5.00	89	70-130				J
Hexachlorobutadiene	5.53	0.40	0.50	ug/l	5.00	111	70-130				
Isopropylbenzene	4.64	0.18	0.50	ug/l	5.00	93	70-130				
m,p-Xylene	4.45	0.33	0.50	ug/l	5.00	89	70-130				
m-Dichlorobenzene	4.82	0.14	0.50	ug/l	5.00	96	70-130				
Methyl tert-butyl ether (MTBE)	18.2	0.94	2.0	ug/l	20.0	91	70-130				
Methylene chloride	3.76	0.30	0.50	ug/l	5.00	75	70-130				
Naphthalene	4.75	0.35	0.50	ug/l	5.00	95	70-130				
n-Butylbenzene	4.56	0.29	0.50	ug/l	5.00	91	70-130				
n-Propylbenzene	4.36	0.18	0.50	ug/l	5.00	87	70-130				
o-Dichlorobenzene	4.95	0.19	0.50	ug/l	5.00	99	70-130				
o-Xylene	4.72	0.20	0.50	ug/l	5.00	94	70-130				
p-Dichlorobenzene	5.01	0.18	0.50	ug/l	5.00	100	70-130				
p-Isopropyltoluene	4.55	0.25	0.50	ug/l	5.00	91	70-130				
sec-Butylbenzene	4.40	0.24	0.50	ug/l	5.00	88	70-130				
Styrene	4.75	0.19	0.50	ug/l	5.00	95	70-130				
Tert-amyl methyl ether	18.6	0.59	2.0	ug/l	20.0	93	70-130				
tert-Butylbenzene	4.70	0.18	0.50	ug/l	5.00	94	70-130				
Tetrachloroethene	5.35	0.18	0.50	ug/l	5.00	107	70-130				
Toluene	4.51	0.29	0.50	ug/l	5.00	90	70-130				
trans-1,2-Dichloroethene	4.12	0.26	0.50	ug/l	5.00	82	70-130				
trans-1,3-Dichloropropene	4.86	0.32	0.50	ug/l	5.00	97	70-130				
Trichloroethene	4.70	0.18	0.50	ug/l	5.00	94	70-130				
Trichlorofluoromethane	4.67	0.18	0.50	ug/l	5.00	93	70-130				
Vinyl chloride	3.73	0.18	0.50	ug/l	5.00	75	70-130				
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0	93	70-130				
4-Bromofluorobenzene	46.6			ug/l	50.0	93	70-130				
LCS Dup (W4C0005-BSD1)						Prepared: 03/01/24 Analyzed: 03/02/24					
1,1,1,2-Tetrachloroethane	4.57	0.24	0.50	ug/l	5.00	91	70-130	6	30		
1,1,1-Trichloroethane	4.51	0.26	0.50	ug/l	5.00	90	70-130	3	30		
1,1,2,2-Tetrachloroethane	4.18	0.20	0.50	ug/l	5.00	84	70-130	4	30		
1,1,2-Trichloroethane	4.29	0.19	0.50	ug/l	5.00	86	70-130	5	30		
1,1-Dichloroethane	4.29	0.27	0.50	ug/l	5.00	86	70-130	2	30		
1,1-Dichloroethene	4.03	0.16	0.50	ug/l	5.00	81	70-130	1	30		
1,1-Dichloropropene	4.02	0.14	0.50	ug/l	5.00	80	70-130	2	30		
1,2,3-Trichlorobenzene	4.94	0.40	0.50	ug/l	5.00	99	70-130	4	30		
1,2,3-Trichloropropane	4.45	0.22	0.50	ug/l	5.00	89	70-130	7	30		
1,2,4-Trichlorobenzene	5.48	0.17	0.50	ug/l	5.00	110	70-130	1	30		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)										
LCS Dup (W4C0005-BSD1)					Prepared: 03/01/24 Analyzed: 03/02/24					
1,2,4-Trimethylbenzene	4.32	0.20	0.50	ug/l	5.00	86	70-130	6	30	
1,2-Dichloroethane	4.30	0.24	0.50	ug/l	5.00	86	70-130	1	30	
1,2-Dichloropropane	3.98	0.13	0.50	ug/l	5.00	80	70-130	0.1	30	
1,3,5-Trimethylbenzene	4.20	0.17	0.50	ug/l	5.00	84	70-130	8	30	
1,3-Dichloropropane	4.35	0.27	0.50	ug/l	5.00	87	70-130	5	30	
2,2-Dichloropropane	3.77	0.17	0.50	ug/l	5.00	75	70-130	15	30	
2-Butanone	3.59	1.5	5.0	ug/l	5.00	72	70-130	1	30	J
2-Chlorotoluene	4.65	0.15	0.50	ug/l	5.00	93	70-130	6	30	
2-Hexanone	4.32	1.2	5.0	ug/l	5.00	86	70-130	3	30	J
4-Chlorotoluene	4.57	0.15	0.50	ug/l	5.00	91	70-130	7	30	
4-Methyl-2-pentanone	4.17	1.8	5.0	ug/l	5.00	83	70-130	2	30	J
Acetone	37.6	3.1	5.0	ug/l	50.0	75	70-130	7	30	
Benzene	4.35	0.15	0.50	ug/l	5.00	87	70-130	0.3	30	
Bromobenzene	4.74	0.15	0.50	ug/l	5.00	95	70-130	7	30	
Bromochloromethane	4.02	0.15	0.50	ug/l	5.00	80	70-130	2	30	
Bromodichloromethane	4.25	0.24	0.50	ug/l	5.00	85	70-130	1	30	
Bromoform	5.25	0.38	0.50	ug/l	5.00	105	70-130	4	30	
Bromomethane	4.32	0.27	0.50	ug/l	5.00	86	70-130	0.9	30	
Carbon Disulfide	4.12	0.25	0.50	ug/l	5.00	82	70-130	0.3	30	
Carbon tetrachloride	4.59	0.27	0.50	ug/l	5.00	92	70-130	4	30	
Chlorobenzene	5.32	0.15	0.50	ug/l	5.00	106	70-130	4	30	
Chloroethane	3.91	0.17	0.50	ug/l	5.00	78	70-130	2	30	
Chloroform	4.33	0.27	0.50	ug/l	5.00	87	70-130	0.2	30	
Chloromethane	3.37	0.23	0.50	ug/l	5.00	67	70-130	1	30	Q-ME
cis-1,2-Dichloroethene	4.11	0.25	0.50	ug/l	5.00	82	70-130	0.5	30	
cis-1,3-Dichloropropene	4.30	0.30	0.50	ug/l	5.00	86	70-130	6	30	
Dibromochloromethane	4.74	0.20	0.50	ug/l	5.00	95	70-130	4	30	
Dibromomethane	4.42	0.20	0.50	ug/l	5.00	88	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	3.83	0.45	0.50	ug/l	5.00	77	70-130	6	30	
Di-isopropyl ether	15.2	1.1	2.0	ug/l	20.0	76	70-130	2	30	
Ethyl tert-butyl ether	17.1	1.0	2.0	ug/l	20.0	86	70-130	4	30	
Ethylbenzene	4.24	0.21	0.50	ug/l	5.00	85	70-130	6	30	
Freon 113	4.44	1.5	5.0	ug/l	5.00	89	70-130	0.3	30	J
Hexachlorobutadiene	5.29	0.40	0.50	ug/l	5.00	106	70-130	4	30	
Isopropylbenzene	4.33	0.18	0.50	ug/l	5.00	87	70-130	7	30	
m,p-Xylene	4.14	0.33	0.50	ug/l	5.00	83	70-130	7	30	
m-Dichlorobenzene	4.68	0.14	0.50	ug/l	5.00	94	70-130	3	30	
Methyl tert-butyl ether (MTBE)	17.5	0.94	2.0	ug/l	20.0	88	70-130	4	30	
Methylene chloride	3.91	0.30	0.50	ug/l	5.00	78	70-130	4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/28/2024 12:21

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0005 - EPA 524.2 (Continued)											
LCS Dup (W4C0005-BSD1)						Prepared: 03/01/24 Analyzed: 03/02/24					
Naphthalene	4.68	0.35	0.50	ug/l	5.00		94	70-130	1	30	
n-Butylbenzene	4.33	0.29	0.50	ug/l	5.00		87	70-130	5	30	
n-Propylbenzene	4.06	0.18	0.50	ug/l	5.00		81	70-130	7	30	
o-Dichlorobenzene	4.72	0.19	0.50	ug/l	5.00		94	70-130	5	30	
o-Xylene	4.45	0.20	0.50	ug/l	5.00		89	70-130	6	30	
p-Dichlorobenzene	4.76	0.18	0.50	ug/l	5.00		95	70-130	5	30	
p-Isopropyltoluene	4.36	0.25	0.50	ug/l	5.00		87	70-130	4	30	
sec-Butylbenzene	4.18	0.24	0.50	ug/l	5.00		84	70-130	5	30	
Styrene	4.47	0.19	0.50	ug/l	5.00		89	70-130	6	30	
Tert-amyl methyl ether	17.5	0.59	2.0	ug/l	20.0		87	70-130	6	30	
tert-Butylbenzene	4.43	0.18	0.50	ug/l	5.00		89	70-130	6	30	
Tetrachloroethene	5.04	0.18	0.50	ug/l	5.00		101	70-130	6	30	
Toluene	4.24	0.29	0.50	ug/l	5.00		85	70-130	6	30	
trans-1,2-Dichloroethene	4.17	0.26	0.50	ug/l	5.00		83	70-130	1	30	
trans-1,3-Dichloropropene	4.56	0.32	0.50	ug/l	5.00		91	70-130	6	30	
Trichloroethene	4.63	0.18	0.50	ug/l	5.00		93	70-130	2	30	
Trichlorofluoromethane	4.36	0.18	0.50	ug/l	5.00		87	70-130	7	30	
Vinyl chloride	3.76	0.18	0.50	ug/l	5.00		75	70-130	0.6	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.6			ug/l	50.0		91	70-130			
4-Bromofluorobenzene	46.0			ug/l	50.0		92	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/28/2024 12:21

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
O-05	The extraction for this analyte was performed outside of the EPA recommended holding time.
Q-ME	Acceptable QC with marginal exceedance
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20056

Report Date: 3/28/2024

Received Date: 2/16/2024

Project: COSM 97-005 - COPCs

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

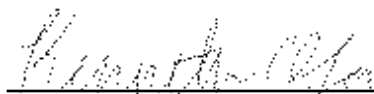
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/16/24 with the Chain-of-Custody document. The samples were received in good condition, at 13.3 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-5-S4	Brown & Caldwell	4B20056-01	Water	02/16/24 12:00	
AT-GS-5-S7	Brown & Caldwell	4B20056-02	Water	02/16/24 12:03	
AT-GS-5-S8	Brown & Caldwell	4B20056-03	Water	02/16/24 12:15	
AT-UV-5-S10	Brown & Caldwell	4B20056-04	Water	02/16/24 12:25	
AT-GAC-5-S11	Brown & Caldwell	4B20056-05	Water	02/16/24 12:30	
AT-GAC-5-S23	Brown & Caldwell	4B20056-06	Water	02/16/24 12:52	
AT-RO-5-S14	Brown & Caldwell	4B20056-07	Water	02/16/24 12:40	
AT-RO-5-S14D	Brown & Caldwell	4B20056-08	Water	02/16/24 12:40	
AT-RO-5-S24	Brown & Caldwell	4B20056-09	Water	02/16/24 13:00	
AT-DEC-5-S18	Brown & Caldwell	4B20056-10	Water	02/16/24 13:10	
AT-DEC-5-S19	Brown & Caldwell	4B20056-11	Water	02/16/24 13:10	
AT-RES-5-S22	Brown & Caldwell	4B20056-12	Water	02/16/24 13:35	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3			⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
EPA 537.1 in Water				
PFHpA	375-85-9	⊗		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B20056-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM							
Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938		Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM	
1,2,3-Trichloropropane	0.044	0.0012	0.0050	ug/l	1	02/25/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487		Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc	
11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	03/12/24	
ADONA	ND	0.46	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	03/12/24	
PFBS	1.8	0.49	1.7	ng/l	1	03/12/24	
PFDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.55	1.7	ng/l	1	03/12/24	
PFHpA	0.71	0.45	1.7	ng/l	1	03/12/24	J
PFHxA	2.3	0.41	1.7	ng/l	1	03/12/24	
PFHxS	1.7	0.50	1.7	ng/l	1	03/12/24	J
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	0.71	0.56	1.7	ng/l	1	03/12/24	J
PFOS	ND	0.45	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/12/24	

Surrogate(s)

13C2-PFDA	111%	Conc: 37.2	70-130	03/12/24
13C2-PFHxA	110%	Conc: 37.2	70-130	03/12/24
d5-EtFOSAA	108%	Conc: 146	70-130	03/12/24
HFPO-DA-13C3	102%	Conc: 34.3	70-130	03/12/24

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2				Instr: GCMS14			
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	0.72	0.27	0.50	ug/l	1	02/29/24	

4B20056

Page 3 of 61

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B20056-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2410

Preparation: EPA 5030B

Prepared: 02/29/24 07:18

Analyst: ADM

1,1-Dichloroethene	3.6	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	0.73	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	4.6	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	2.0	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B20056-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2410

Preparation: EPA 5030B

Prepared: 02/29/24 07:18

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	1.4	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	4.6		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	48	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	02/29/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	81%	Conc: 40.5	70-130	02/29/24
4-Bromofluorobenzene	82%	Conc: 40.9	70-130	02/29/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B20056-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2410

Preparation: EPA 5030B

Prepared: 02/29/24 07:18

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B20056-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1944

Preparation: EPA 522/SPE

Prepared: 02/27/24 08:30

Analyst: mld

1,4-Dioxane	57	0.56	1.4	ug/l	20	02/29/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	101%	Conc: 10.2	70-130			02/29/24	
----------------	------	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B20056-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1944	Preparation: EPA 522/SPE		Prepared: 02/27/24 08:30		Analyst: mld		
1,4-Dioxane	0.32	0.028	0.070	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	83%	Conc: 8.20	70-130			02/29/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B1938	Preparation: EPA 5030B		Prepared: 02/23/24 07:57		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/25/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	03/12/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	03/12/24	
ADONA	ND	0.46	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	03/12/24	
PFBS	ND	0.49	1.7	ng/l	1	03/12/24	
PFDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.55	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.45	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.41	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.50	1.7	ng/l	1	03/12/24	
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	ND	0.56	1.7	ng/l	1	03/12/24	
PFOS	ND	0.45	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 37.7	70-130			03/12/24	
13C2-PFHxA	110%	Conc: 37.1	70-130			03/12/24	
d5-EtFOSAA	108%	Conc: 146	70-130			03/12/24	
HFPO-DA-13C3	101%	Conc: 34.1	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20056

Page 7 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B20056-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	0.58	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	7.3	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B20056-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	1.4	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	0.34	0.18	0.50	ug/l	1	02/29/24	J
THMs, Total	8.7		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	5.9	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B20056-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	80%	Conc: 40.2	70-130			02/29/24	
4-Bromofluorobenzene	82%	Conc: 40.8	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S8

Sampled: 02/16/24 12:15 by Brown & Caldwell

4B20056-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W4B1938

Preparation: EPA 5030B

Prepared: 02/23/24 07:57

Analyst: ADM

1,2,3-Trichloropropane	0.042	0.0012	0.0050	ug/l	1	02/26/24	
------------------------	-------	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W4B2487

Preparation: EPA 537/SPE

Prepared: 02/29/24 13:16

Analyst: ajc

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
11CI-PF3OUdS	ND	0.49	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	03/12/24	
ADONA	ND	0.48	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/12/24	
PFBS	1.7	0.50	1.7	ng/l	1	03/12/24	J
PFDA	ND	0.39	1.7	ng/l	1	03/12/24	
PFDaA	ND	0.57	1.7	ng/l	1	03/12/24	
PFHpA	0.72	0.46	1.7	ng/l	1	03/12/24	J
PFHxA	2.3	0.42	1.7	ng/l	1	03/12/24	
PFHxS	1.8	0.51	1.7	ng/l	1	03/12/24	
PFNA	ND	0.45	1.7	ng/l	1	03/12/24	
PFOA	0.73	0.58	1.7	ng/l	1	03/12/24	J
PFOS	ND	0.46	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/12/24	
PFTrDA	ND	0.36	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/12/24	

Surrogate(s)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
13C2-PFDA	111%	Conc: 38.5	70-130			03/12/24	
13C2-PFHxA	108%	Conc: 37.3	70-130			03/12/24	
d5-EtFOSAA	109%	Conc: 151	70-130			03/12/24	
HFPO-DA-13C3	100%	Conc: 34.4	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2410

Preparation: EPA 5030B

Prepared: 02/29/24 07:18

Analyst: ADM

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	0.71	0.27	0.50	ug/l	1	02/29/24	

4B20056

Page 11 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S8

Sampled: 02/16/24 12:15 by Brown & Caldwell

4B20056-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1-Dichloroethene	3.5	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	1.9	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	0.73	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	4.5	0.27	0.50	ug/l	1	02/29/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	1.9	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	0.52	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S8

Sampled: 02/16/24 12:15 by Brown & Caldwell

4B20056-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2410

Preparation: EPA 5030B

Prepared: 02/29/24 07:18

Analyst: ADM

Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	1.3	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	6.9		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	48	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	0.22	0.18	0.50	ug/l	1	02/29/24	J
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	81%	Conc: 40.4	70-130	02/29/24
4-Bromofluorobenzene	82%	Conc: 40.8	70-130	02/29/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GS-5-S8

Sampled: 02/16/24 12:15 by Brown & Caldwell

4B20056-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2410

Preparation: EPA 5030B

Prepared: 02/29/24 07:18

Analyst: ADM

Sample Results

(Continued)

Sample: AT-GS-5-S8

Sampled: 02/16/24 12:15 by Brown & Caldwell

4B20056-03RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1943

Preparation: EPA 522/SPE

Prepared: 02/26/24 08:28

Analyst: mld

1,4-Dioxane	50	0.56	1.4	ug/l	20	02/28/24	M-06
-------------	----	------	-----	------	----	----------	------

Surrogate(s)

1,4-Dioxane-d8	92%	Conc: 9.08	70-130			02/28/24	
----------------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-5-S10

Sampled: 02/16/24 12:25 by Brown & Caldwell

4B20056-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1943	Preparation: EPA 522/SPE		Prepared: 02/26/24 08:28		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 9.44	70-130			02/27/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B2282	Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM		
1,2,3-Trichloropropane	0.016	0.0012	0.0050	ug/l	1	02/28/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.47	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	03/12/24	
ADONA	ND	0.46	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	03/12/24	
PFBS	1.8	0.48	1.7	ng/l	1	03/12/24	
PFDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.55	1.7	ng/l	1	03/12/24	
PFHpA	0.69	0.45	1.7	ng/l	1	03/12/24	J
PFHxA	2.4	0.41	1.7	ng/l	1	03/12/24	
PFHxS	1.7	0.50	1.7	ng/l	1	03/12/24	J
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	0.72	0.56	1.7	ng/l	1	03/12/24	J
PFOS	ND	0.44	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	114%	Conc: 38.3	70-130			03/12/24	
13C2-PFHxA	110%	Conc: 37.1	70-130			03/12/24	
d5-EtFOSAA	108%	Conc: 145	70-130			03/12/24	
HFPO-DA-13C3	98%	Conc: 32.9	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20056

Page 15 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-5-S10

Sampled: 02/16/24 12:25 by Brown & Caldwell

4B20056-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	0.35	0.27	0.50	ug/l	1	02/29/24	J
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	0.85	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	4.1	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-UV-5-S10

Sampled: 02/16/24 12:25 by Brown & Caldwell

4B20056-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	4.1		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	0.23	0.18	0.50	ug/l	1	02/29/24	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-UV-5-S10

Sampled: 02/16/24 12:25 by Brown & Caldwell

4B20056-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.2	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 42.2	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-5-S11

Sampled: 02/16/24 12:30 by Brown & Caldwell

4B20056-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1943	Preparation: EPA 522/SPE		Prepared: 02/26/24 08:28		Analyst: mld		
1,4-Dioxane	0.59	0.028	0.070	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 9.46	70-130			02/27/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B2282	Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11Cl-PF3OUdS	ND	0.47	1.7	ng/l	1	03/12/24	
9Cl-PF3ONS	ND	0.44	1.7	ng/l	1	03/12/24	
ADONA	ND	0.46	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.73	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.48	1.7	ng/l	1	03/12/24	
PFBS	ND	0.48	1.7	ng/l	1	03/12/24	
PFDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.55	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.45	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.41	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.50	1.7	ng/l	1	03/12/24	
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	ND	0.56	1.7	ng/l	1	03/12/24	
PFOS	ND	0.44	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 37.7	70-130			03/12/24	
13C2-PFHxA	110%	Conc: 37.0	70-130			03/12/24	
d5-EtFOSAA	106%	Conc: 142	70-130			03/12/24	
HFPO-DA-13C3	96%	Conc: 32.2	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20056

Page 19 of 61

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-5-S11

Sampled: 02/16/24 12:30 by Brown & Caldwell

4B20056-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-5-S11

Sampled: 02/16/24 12:30 by Brown & Caldwell

4B20056-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2410

Preparation: EPA 5030B

Prepared: 02/29/24 07:18

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	ND		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-5-S11

Sampled: 02/16/24 12:30 by Brown & Caldwell

4B20056-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	81%	Conc: 40.4	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 42.1	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-5-S23

Sampled: 02/16/24 12:52 by Brown & Caldwell

4B20056-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1943	Preparation: EPA 522/SPE		Prepared: 02/26/24 08:28		Analyst: mld		
1,4-Dioxane	0.093	0.028	0.070	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	101%	Conc: 9.92	70-130			02/27/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B2282	Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.46	1.7	ng/l	1	03/12/24	
ADONA	ND	0.48	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.50	1.7	ng/l	1	03/12/24	
PFBS	ND	0.50	1.7	ng/l	1	03/12/24	
PFDA	ND	0.39	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/12/24	
PFNA	ND	0.45	1.7	ng/l	1	03/12/24	
PFOA	ND	0.57	1.7	ng/l	1	03/12/24	
PFOS	ND	0.46	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	106%	Conc: 36.6	70-130			03/12/24	
13C2-PFHxA	112%	Conc: 38.5	70-130			03/12/24	
d5-EtFOSAA	106%	Conc: 146	70-130			03/12/24	
HFPO-DA-13C3	103%	Conc: 35.6	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-5-S23

Sampled: 02/16/24 12:52 by Brown & Caldwell

4B20056-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-GAC-5-S23

Sampled: 02/16/24 12:52 by Brown & Caldwell

4B20056-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B2410

Preparation: EPA 5030B

Prepared: 02/29/24 07:18

Analyst: ADM

Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	ND		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-GAC-5-S23

Sampled: 02/16/24 12:52 by Brown & Caldwell

4B20056-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	79%	Conc: 39.6	70-130			02/29/24	
4-Bromofluorobenzene	81%	Conc: 40.7	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S14

Sampled: 02/16/24 12:40 by Brown & Caldwell

4B20056-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Method: EPA 522

Instr: GCMS20

Batch ID: W4B1943

Preparation: EPA 522/SPE

Prepared: 02/26/24 08:28

Analyst: mld

1,4-Dioxane	0.31	0.028	0.070	ug/l	1	02/27/24	
-------------	------	-------	-------	------	---	----------	--

Surrogate(s)

1,4-Dioxane-d8	88%	Conc: 8.85	70-130			02/27/24	
----------------	-----	------------	--------	--	--	----------	--

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS12

Batch ID: W4B2282

Preparation: EPA 5030B

Prepared: 02/28/24 07:17

Analyst: ADM

1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	
------------------------	----	--------	--------	------	---	----------	--

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1

Instr: LCMS06

Batch ID: W4B2487

Preparation: EPA 537/SPE

Prepared: 02/29/24 13:16

Analyst: ajc

11CI-PF3OUdS	ND	0.50	1.8	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.47	1.8	ng/l	1	03/12/24	
ADONA	ND	0.49	1.8	ng/l	1	03/12/24	
EtFOSAA	ND	0.43	1.8	ng/l	1	03/12/24	
HFPO-DA	ND	0.77	1.8	ng/l	1	03/12/24	
MeFOSAA	ND	0.51	1.8	ng/l	1	03/12/24	
PFBS	ND	0.51	1.8	ng/l	1	03/12/24	
PFDA	ND	0.40	1.8	ng/l	1	03/12/24	
PFDoA	ND	0.58	1.8	ng/l	1	03/12/24	
PFHpA	ND	0.47	1.8	ng/l	1	03/12/24	
PFHxA	ND	0.43	1.8	ng/l	1	03/12/24	
PFHxS	ND	0.53	1.8	ng/l	1	03/12/24	
PFNA	ND	0.46	1.8	ng/l	1	03/12/24	
PFOA	ND	0.59	1.8	ng/l	1	03/12/24	
PFOS	ND	0.47	1.8	ng/l	1	03/12/24	
PFTeDA	ND	0.40	1.8	ng/l	1	03/12/24	
PFTTrDA	ND	0.37	1.8	ng/l	1	03/12/24	
PFUnA	ND	0.42	1.8	ng/l	1	03/12/24	

Surrogate(s)

13C2-PFDA	112%	Conc: 39.9	70-130			03/12/24	
13C2-PFHxA	108%	Conc: 38.3	70-130			03/12/24	
d5-EtFOSAA	112%	Conc: 159	70-130			03/12/24	
HFPO-DA-13C3	95%	Conc: 33.8	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20056

Page 27 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S14

Sampled: 02/16/24 12:40 by Brown & Caldwell

4B20056-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	0.31	0.16	0.50	ug/l	1	02/29/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	7.5	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S14

Sampled: 02/16/24 12:40 by Brown & Caldwell

4B20056-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	1.4	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	0.21	0.18	0.50	ug/l	1	02/29/24	J
THMs, Total	8.9		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	4.0	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S14

Sampled: 02/16/24 12:40 by Brown & Caldwell

4B20056-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	81%	Conc: 40.3	70-130			02/29/24	
4-Bromofluorobenzene	81%	Conc: 40.7	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S14D

Sampled: 02/16/24 12:40 by Brown & Caldwell

4B20056-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1943	Preparation: EPA 522/SPE		Prepared: 02/26/24 08:28		Analyst: mld		
1,4-Dioxane	0.31	0.028	0.070	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	89%	Conc: 8.86	70-130			02/27/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B2282	Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	03/12/24	
ADONA	ND	0.47	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.74	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/12/24	
PFBS	ND	0.49	1.7	ng/l	1	03/12/24	
PFDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.45	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.41	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.50	1.7	ng/l	1	03/12/24	
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	ND	0.57	1.7	ng/l	1	03/12/24	
PFOS	ND	0.45	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	109%	Conc: 37.1	70-130			03/12/24	
13C2-PFHxA	103%	Conc: 35.0	70-130			03/12/24	
d5-EtFOSAA	105%	Conc: 143	70-130			03/12/24	
HFPO-DA-13C3	96%	Conc: 32.4	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S14D

Sampled: 02/16/24 12:40 by Brown & Caldwell

4B20056-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	0.30	0.16	0.50	ug/l	1	02/29/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	7.6	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S14D

Sampled: 02/16/24 12:40 by Brown & Caldwell

4B20056-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	1.5	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	0.24	0.18	0.50	ug/l	1	02/29/24	J
THMs, Total	9.1		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	3.8	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S14D

Sampled: 02/16/24 12:40 by Brown & Caldwell

4B20056-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.2	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 41.8	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S24

Sampled: 02/16/24 13:00 by Brown & Caldwell

4B20056-09 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1943	Preparation: EPA 522/SPE		Prepared: 02/26/24 08:28		Analyst: mld		
1,4-Dioxane	ND	0.028	0.070	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	92%	Conc: 9.15	70-130			02/27/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B2282	Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.46	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.44	1.7	ng/l	1	03/12/24	
ADONA	ND	0.46	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.40	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.72	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.47	1.7	ng/l	1	03/12/24	
PFBS	ND	0.48	1.7	ng/l	1	03/12/24	
PFDA	ND	0.37	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.54	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.44	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.40	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.49	1.7	ng/l	1	03/12/24	
PFNA	ND	0.43	1.7	ng/l	1	03/12/24	
PFOA	ND	0.55	1.7	ng/l	1	03/12/24	
PFOS	ND	0.44	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.37	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.34	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.39	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 36.8	70-130			03/12/24	
13C2-PFHxA	107%	Conc: 35.3	70-130			03/12/24	
d5-EtFOSAA	102%	Conc: 135	70-130			03/12/24	
HFPO-DA-13C3	74%	Conc: 24.5	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S24

Sampled: 02/16/24 13:00 by Brown & Caldwell

4B20056-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	0.23	0.16	0.50	ug/l	1	02/29/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	8.1	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	5.2	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S24

Sampled: 02/16/24 13:00 by Brown & Caldwell

4B20056-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	1.0	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	6.2		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	2.6	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RO-5-S24

Sampled: 02/16/24 13:00 by Brown & Caldwell

4B20056-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.5	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 42.0	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-5-S18

Sampled: 02/16/24 13:10 by Brown & Caldwell

4B20056-10 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1943	Preparation: EPA 522/SPE		Prepared: 02/26/24 08:28		Analyst: mld		
1,4-Dioxane	0.078	0.028	0.070	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 9.45	70-130			02/27/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B2282	Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	03/12/24	
ADONA	ND	0.47	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.74	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/12/24	
PFBS	ND	0.49	1.7	ng/l	1	03/12/24	
PFDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.45	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.41	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.50	1.7	ng/l	1	03/12/24	
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	ND	0.57	1.7	ng/l	1	03/12/24	
PFOS	ND	0.45	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	113%	Conc: 38.5	70-130			03/12/24	
13C2-PFHxA	109%	Conc: 37.2	70-130			03/12/24	
d5-EtFOSAA	107%	Conc: 146	70-130			03/12/24	
HFPO-DA-13C3	93%	Conc: 31.6	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-5-S18

Sampled: 02/16/24 13:10 by Brown & Caldwell

4B20056-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	0.26	0.16	0.50	ug/l	1	02/29/24	J
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	5.6	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-5-S18

Sampled: 02/16/24 13:10 by Brown & Caldwell

4B20056-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	1.1	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	6.7		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	3.0	0.18	0.50	ug/l	1	02/29/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-5-S18

Sampled: 02/16/24 13:10 by Brown & Caldwell

4B20056-10 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	81%	Conc: 40.3	70-130			02/29/24	
4-Bromofluorobenzene	83%	Conc: 41.3	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-5-S19

Sampled: 02/16/24 13:10 by Brown & Caldwell

4B20056-11 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1943	Preparation: EPA 522/SPE		Prepared: 02/26/24 08:28		Analyst: mld		
1,4-Dioxane	0.080	0.028	0.070	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	93%	Conc: 9.14	70-130			02/27/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B2282	Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11Cl-PF3OUdS	ND	0.48	1.7	ng/l	1	03/12/24	
9Cl-PF3ONS	ND	0.45	1.7	ng/l	1	03/12/24	
ADONA	ND	0.47	1.7	ng/l	1	03/12/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.74	1.7	ng/l	1	03/12/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/12/24	
PFBS	ND	0.49	1.7	ng/l	1	03/12/24	
PFDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.45	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.41	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.50	1.7	ng/l	1	03/12/24	
PFNA	ND	0.44	1.7	ng/l	1	03/12/24	
PFOA	ND	0.57	1.7	ng/l	1	03/12/24	
PFOS	ND	0.45	1.7	ng/l	1	03/12/24	
PFTeDA	ND	0.38	1.7	ng/l	1	03/12/24	
PFTTrDA	ND	0.35	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.40	1.7	ng/l	1	03/12/24	
<i>Surrogate(s)</i>							
13C2-PFDA	112%	Conc: 38.1	70-130			03/12/24	
13C2-PFHxA	108%	Conc: 36.6	70-130			03/12/24	
d5-EtFOSAA	101%	Conc: 137	70-130			03/12/24	
HFPO-DA-13C3	87%	Conc: 29.6	70-130			03/12/24	

Volatile Organic Compounds by P&T and GC/MS

4B20056

Page 43 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-5-S19

Sampled: 02/16/24 13:10 by Brown & Caldwell

4B20056-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	3.7	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-5-S19

Sampled: 02/16/24 13:10 by Brown & Caldwell

4B20056-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	0.55	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	4.2		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	0.28	0.18	0.50	ug/l	1	02/29/24	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-DEC-5-S19

Sampled: 02/16/24 13:10 by Brown & Caldwell

4B20056-11 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	82%	Conc: 41.2	70-130			02/29/24	
4-Bromofluorobenzene	85%	Conc: 42.5	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:35 by Brown & Caldwell

4B20056-12 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4B1943	Preparation: EPA 522/SPE		Prepared: 02/26/24 08:28		Analyst: mld		
1,4-Dioxane	0.082	0.028	0.070	ug/l	1	02/27/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	95%	Conc: 9.54	70-130			02/27/24	

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP				Instr: GCMS12			
Batch ID: W4B2282	Preparation: EPA 5030B		Prepared: 02/28/24 07:17		Analyst: ADM		
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l	1	02/28/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 537.1				Instr: LCMS06			
Batch ID: W4B2487	Preparation: EPA 537/SPE		Prepared: 02/29/24 13:16		Analyst: ajc		
11CI-PF3OUdS	ND	0.48	1.7	ng/l	1	03/13/24	
9CI-PF3ONS	ND	0.45	1.7	ng/l	1	03/13/24	
ADONA	ND	0.47	1.7	ng/l	1	03/13/24	
EtFOSAA	ND	0.41	1.7	ng/l	1	03/13/24	
HFPO-DA	ND	0.75	1.7	ng/l	1	03/13/24	
MeFOSAA	ND	0.49	1.7	ng/l	1	03/13/24	
PFBS	ND	0.50	1.7	ng/l	1	03/13/24	
PFDA	ND	0.39	1.7	ng/l	1	03/13/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/13/24	
PFHpA	ND	0.46	1.7	ng/l	1	03/13/24	
PFHxA	ND	0.42	1.7	ng/l	1	03/13/24	
PFHxS	ND	0.51	1.7	ng/l	1	03/13/24	
PFNA	ND	0.45	1.7	ng/l	1	03/13/24	
PFOA	ND	0.57	1.7	ng/l	1	03/13/24	
PFOS	ND	0.46	1.7	ng/l	1	03/13/24	
PFTeDA	ND	0.39	1.7	ng/l	1	03/13/24	
PFTTrDA	ND	0.36	1.7	ng/l	1	03/13/24	
PFUnA	ND	0.41	1.7	ng/l	1	03/13/24	
<i>Surrogate(s)</i>							
13C2-PFDA	110%	Conc: 37.9	70-130			03/13/24	
13C2-PFHxA	108%	Conc: 37.3	70-130			03/13/24	
d5-EtFOSAA	106%	Conc: 146	70-130			03/13/24	
HFPO-DA-13C3	94%	Conc: 32.2	70-130			03/13/24	

Volatile Organic Compounds by P&T and GC/MS

4B20056

Page 47 of 61

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:35 by Brown & Caldwell

4B20056-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B		Prepared: 02/29/24 07:18		Analyst: ADM	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/29/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/29/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/29/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/29/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/29/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/29/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/29/24	
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l	1	02/29/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/29/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/29/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/29/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/29/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/29/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/29/24	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/29/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/29/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/29/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/29/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/29/24	
Acetone	ND	3.1	5.0	ug/l	1	02/29/24	
Benzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/29/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/29/24	
Bromoform	4.0	0.38	0.50	ug/l	1	02/29/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/29/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/29/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/29/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/29/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/29/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:35 by Brown & Caldwell

4B20056-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Chloromethane	ND	0.23	0.50	ug/l	1	02/29/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/29/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/29/24	
Dibromochloromethane	0.61	0.20	0.50	ug/l	1	02/29/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/29/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/29/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/29/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/29/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/29/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/29/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/29/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/29/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/29/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/29/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/29/24	
Naphthalene	ND	0.35	0.50	ug/l	1	02/29/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/29/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/29/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/29/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/29/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/29/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/29/24	
Styrene	ND	0.19	0.50	ug/l	1	02/29/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/29/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/29/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/29/24	
THMs, Total	4.6		0.50	ug/l	1	02/29/24	
Toluene	ND	0.29	0.50	ug/l	1	02/29/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/29/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/29/24	
Trichloroethene	0.32	0.18	0.50	ug/l	1	02/29/24	J
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:35 by Brown & Caldwell

4B20056-12 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2410		Preparation: EPA 5030B			Prepared: 02/29/24 07:18		Analyst: ADM
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/29/24	
Xylenes, Total	ND	0.33	0.50	ug/l	1	02/29/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	83%	Conc: 41.3	70-130			02/29/24	
4-Bromofluorobenzene	84%	Conc: 42.2	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1943 - EPA 522											
Blank (W4B1943-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.72			ug/l	10.0		87	70-130			
LCS (W4B1943-BS1)											
1,4-Dioxane	1.80	0.028	0.070	ug/l	2.00		90	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.91			ug/l	10.0		89	70-130			
LCS Dup (W4B1943-BSD1)											
1,4-Dioxane	1.73	0.028	0.070	ug/l	2.00		86	70-130	4	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	8.62			ug/l	10.0		86	70-130			
Batch: W4B1944 - EPA 522											
Blank (W4B1944-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.21			ug/l	10.0		92	70-130			
LCS (W4B1944-BS1)											
1,4-Dioxane	0.0515	0.028	0.070	ug/l	0.0600		86	50-150			J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.39			ug/l	10.0		94	70-130			
LCS Dup (W4B1944-BSD1)											
1,4-Dioxane	0.0600	0.028	0.070	ug/l	0.0600		100	50-150	15	50	J
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.73			ug/l	10.0		97	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1938 - SRL 524M-TCP											
Blank (W4B1938-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared: 02/23/24 Analyzed: 02/24/24						
LCS (W4B1938-BS1)											
1,2,3-Trichloropropane	0.0218	0.0012	0.0050	ug/l	0.0200		109	80-120			
					Prepared: 02/23/24 Analyzed: 02/24/24						
LCS Dup (W4B1938-BSD1)											
1,2,3-Trichloropropane	0.0217	0.0012	0.0050	ug/l	0.0200		109	80-120	0.4	20	
					Prepared: 02/23/24 Analyzed: 02/24/24						
Duplicate (W4B1938-DUP1)											
		Source: 4B20050-08			Prepared: 02/23/24 Analyzed: 02/25/24						
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l		ND				20	
Batch: W4B2282 - SRL 524M-TCP											
Blank (W4B2282-BLK1)											
1,2,3-Trichloropropane	ND	0.0012	0.0050	ug/l							
					Prepared & Analyzed: 02/28/24						
LCS (W4B2282-BS1)											
1,2,3-Trichloropropane	0.0188	0.0012	0.0050	ug/l	0.0200		94	80-120			
					Prepared & Analyzed: 02/28/24						
LCS Dup (W4B2282-BSD1)											
1,2,3-Trichloropropane	0.0210	0.0012	0.0050	ug/l	0.0200		105	80-120	11	20	
					Prepared & Analyzed: 02/28/24						
Duplicate (W4B2282-DUP1)											
		Source: 4B20056-04			Prepared & Analyzed: 02/28/24						
1,2,3-Trichloropropane	0.0171	0.0012	0.0050	ug/l		0.0164			4	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:

03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2487 - EPA 537.1									
Blank (W4B2487-BLK1)					Prepared: 02/29/24 Analyzed: 03/12/24				
11CI-PF3OUdS	ND	0.56	2.0	ng/l					
9CI-PF3ONS	ND	0.53	2.0	ng/l					
ADONA	ND	0.55	2.0	ng/l					
EtFOSAA	ND	0.48	2.0	ng/l					
HFPO-DA	ND	0.87	2.0	ng/l					
MeFOSAA	ND	0.58	2.0	ng/l					
PFBS	ND	0.58	2.0	ng/l					
PFDA	ND	0.45	2.0	ng/l					
PFDoA	ND	0.66	2.0	ng/l					
PFHpA	ND	0.53	2.0	ng/l					
PFHxA	ND	0.49	2.0	ng/l					
PFHxS	ND	0.59	2.0	ng/l					
PFNA	ND	0.52	2.0	ng/l					
PFOA	ND	0.67	2.0	ng/l					
PFOS	ND	0.53	2.0	ng/l					
PFTeDA	ND	0.45	2.0	ng/l					
PFTrDA	ND	0.42	2.0	ng/l					
PFUnA	ND	0.48	2.0	ng/l					
<i>Surrogate(s)</i>									
13C2-PFDA	46.4			ng/l	40.0		116 70-130		
13C2-PFHxA	46.1			ng/l	40.0		115 70-130		
d5-EtFOSAA	177			ng/l	160		110 70-130		
HFPO-DA-13C3	39.7			ng/l	40.0		99 70-130		
LCS (W4B2487-BS1)					Prepared: 02/29/24 Analyzed: 03/12/24				
11CI-PF3OUdS	2.01	0.56	2.0	ng/l	2.00		101 50-150		
9CI-PF3ONS	2.11	0.53	2.0	ng/l	2.00		105 50-150		
ADONA	2.07	0.55	2.0	ng/l	2.00		104 50-150		
EtFOSAA	2.27	0.48	2.0	ng/l	2.00		114 50-150		
HFPO-DA	1.81	0.87	2.0	ng/l	2.00		91 50-150		J
MeFOSAA	1.92	0.58	2.0	ng/l	2.00		96 50-150		J
PFBS	2.21	0.58	2.0	ng/l	2.00		110 50-150		
PFDA	2.07	0.45	2.0	ng/l	2.00		104 50-150		
PFDoA	1.91	0.66	2.0	ng/l	2.00		96 50-150		J
PFHpA	2.17	0.53	2.0	ng/l	2.00		109 50-150		
PFHxA	2.11	0.49	2.0	ng/l	2.00		105 50-150		
PFHxS	2.29	0.59	2.0	ng/l	2.00		115 50-150		
PFNA	2.10	0.52	2.0	ng/l	2.00		105 50-150		
PFOA	2.16	0.67	2.0	ng/l	2.00		108 50-150		
PFOS	2.18	0.53	2.0	ng/l	2.00		109 50-150		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2487 - EPA 537.1 (Continued)											
LCS (W4B2487-BS1)						Prepared: 02/29/24 Analyzed: 03/12/24					
PFTeDA	2.76	0.45	2.0	ng/l	2.00		138	50-150			
PFTTrDA	1.89	0.42	2.0	ng/l	2.00		94	50-150			J
PFUnA	1.96	0.48	2.0	ng/l	2.00		98	50-150			J
<i>Surrogate(s)</i>											
13C2-PFDA	43.2			ng/l	40.0		108	70-130			
13C2-PFHxA	43.3			ng/l	40.0		108	70-130			
d5-EtFOSAA	166			ng/l	160		104	70-130			
HFPO-DA-13C3	38.0			ng/l	40.0		95	70-130			
LCS Dup (W4B2487-BSD1)						Prepared: 02/29/24 Analyzed: 03/12/24					
11Cl-PF3OUdS	2.01	0.56	2.0	ng/l	2.00		100	50-150	0.4	30	
9Cl-PF3ONS	2.07	0.53	2.0	ng/l	2.00		104	50-150	2	30	
ADONA	2.15	0.55	2.0	ng/l	2.00		108	50-150	4	30	
EtFOSAA	2.02	0.48	2.0	ng/l	2.00		101	50-150	12	30	
HFPO-DA	1.47	0.87	2.0	ng/l	2.00		74	50-150	21	30	J
MeFOSAA	2.25	0.58	2.0	ng/l	2.00		113	50-150	16	30	
PFBS	2.26	0.58	2.0	ng/l	2.00		113	50-150	2	30	
PFDA	2.13	0.45	2.0	ng/l	2.00		107	50-150	3	30	
PFDoA	2.07	0.66	2.0	ng/l	2.00		103	50-150	8	30	
PFHpA	2.24	0.53	2.0	ng/l	2.00		112	50-150	3	30	
PFHxA	2.25	0.49	2.0	ng/l	2.00		112	50-150	7	30	
PFHxS	2.33	0.59	2.0	ng/l	2.00		117	50-150	2	30	
PFNA	2.27	0.52	2.0	ng/l	2.00		114	50-150	8	30	
PFOA	2.29	0.67	2.0	ng/l	2.00		114	50-150	6	30	
PFOS	2.27	0.53	2.0	ng/l	2.00		113	50-150	4	30	
PFTeDA	2.59	0.45	2.0	ng/l	2.00		130	50-150	6	30	
PFTTrDA	2.02	0.42	2.0	ng/l	2.00		101	50-150	7	30	
PFUnA	2.17	0.48	2.0	ng/l	2.00		108	50-150	10	30	
<i>Surrogate(s)</i>											
13C2-PFDA	44.9			ng/l	40.0		112	70-130			
13C2-PFHxA	44.8			ng/l	40.0		112	70-130			
d5-EtFOSAA	171			ng/l	160		107	70-130			
HFPO-DA-13C3	31.6			ng/l	40.0		79	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2											
Blank (W4B2410-BLK1)						Prepared & Analyzed: 02/29/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.22	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Acrylonitrile	ND	1.5	2.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)										
Blank (W4B2410-BLK1)					Prepared & Analyzed: 02/29/24					
Dibromomethane	ND	0.20	0.50	ug/l						
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l						
Di-isopropyl ether	ND	1.1	2.0	ug/l						
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l						
Ethylbenzene	ND	0.21	0.50	ug/l						
Freon 113	ND	1.5	5.0	ug/l						
Hexachlorobutadiene	ND	0.40	0.50	ug/l						
Isopropylbenzene	ND	0.18	0.50	ug/l						
m,p-Xylene	ND	0.33	0.50	ug/l						
m-Dichlorobenzene	ND	0.14	0.50	ug/l						
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l						
Methylene chloride	ND	0.30	0.50	ug/l						
Naphthalene	ND	0.35	0.50	ug/l						
n-Butylbenzene	ND	0.29	0.50	ug/l						
n-Propylbenzene	ND	0.18	0.50	ug/l						
o-Dichlorobenzene	ND	0.19	0.50	ug/l						
o-Xylene	ND	0.20	0.50	ug/l						
p-Dichlorobenzene	ND	0.18	0.50	ug/l						
p-Isopropyltoluene	ND	0.25	0.50	ug/l						
sec-Butylbenzene	ND	0.24	0.50	ug/l						
Styrene	ND	0.19	0.50	ug/l						
Tert-amyl methyl ether	ND	0.59	2.0	ug/l						
tert-Butylbenzene	ND	0.18	0.50	ug/l						
Tetrachloroethene	ND	0.18	0.50	ug/l						
THMs, Total	ND		0.50	ug/l						
Toluene	ND	0.29	0.50	ug/l						
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l						
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l						
Trichloroethene	ND	0.18	0.50	ug/l						
Trichlorofluoromethane	ND	0.18	0.50	ug/l						
Vinyl chloride	ND	0.18	0.50	ug/l						
Xylenes, Total	ND	0.33	0.50	ug/l						
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	40.5			ug/l	50.0		81	70-130		
4-Bromofluorobenzene	41.9			ug/l	50.0		84	70-130		
LCS (W4B2410-BS1)					Prepared & Analyzed: 02/29/24					
1,1,1,2-Tetrachloroethane	4.77	0.24	0.50	ug/l	5.00		95	70-130		
1,1,1-Trichloroethane	4.55	0.26	0.50	ug/l	5.00		91	70-130		
1,1,2,2-Tetrachloroethane	4.31	0.20	0.50	ug/l	5.00		86	70-130		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)										
LCS (W4B2410-BS1)					Prepared & Analyzed: 02/29/24					
1,1,2-Trichloroethane	4.44	0.19	0.50	ug/l	5.00		89 70-130			
1,1-Dichloroethane	4.25	0.27	0.50	ug/l	5.00		85 70-130			
1,1-Dichloroethene	4.20	0.16	0.50	ug/l	5.00		84 70-130			
1,1-Dichloropropene	4.27	0.14	0.50	ug/l	5.00		85 70-130			
1,2,3-Trichlorobenzene	5.08	0.40	0.50	ug/l	5.00		102 70-130			
1,2,3-Trichloropropane	4.74	0.22	0.50	ug/l	5.00		95 70-130			
1,2,4-Trichlorobenzene	5.31	0.17	0.50	ug/l	5.00		106 70-130			
1,2,4-Trimethylbenzene	4.57	0.20	0.50	ug/l	5.00		91 70-130			
1,2-Dichloroethane	4.28	0.24	0.50	ug/l	5.00		86 70-130			
1,2-Dichloropropane	4.10	0.13	0.50	ug/l	5.00		82 70-130			
1,3,5-Trimethylbenzene	4.51	0.17	0.50	ug/l	5.00		90 70-130			
1,3-Dichloropropane	4.42	0.27	0.50	ug/l	5.00		88 70-130			
2,2-Dichloropropane	5.07	0.17	0.50	ug/l	5.00		101 70-130			
2-Butanone	3.71	1.5	5.0	ug/l	5.00		74 70-130			J
2-Chlorotoluene	4.93	0.15	0.50	ug/l	5.00		99 70-130			
2-Hexanone	4.38	1.2	5.0	ug/l	5.00		88 70-130			J
4-Chlorotoluene	4.87	0.15	0.50	ug/l	5.00		97 70-130			
4-Methyl-2-pentanone	4.29	1.8	5.0	ug/l	5.00		86 70-130			J
Acetone	39.7	3.1	5.0	ug/l	50.0		79 70-130			
Benzene	4.37	0.15	0.50	ug/l	5.00		87 70-130			
Bromobenzene	4.85	0.15	0.50	ug/l	5.00		97 70-130			
Bromochloromethane	4.02	0.15	0.50	ug/l	5.00		80 70-130			
Bromodichloromethane	4.36	0.24	0.50	ug/l	5.00		87 70-130			
Bromoform	5.10	0.38	0.50	ug/l	5.00		102 70-130			
Bromomethane	4.39	0.27	0.50	ug/l	5.00		88 70-130			
Carbon Disulfide	4.23	0.25	0.50	ug/l	5.00		85 70-130			
Carbon tetrachloride	4.70	0.27	0.50	ug/l	5.00		94 70-130			
Chlorobenzene	4.90	0.15	0.50	ug/l	5.00		98 70-130			
Chloroethane	4.07	0.17	0.50	ug/l	5.00		81 70-130			
Chloroform	4.38	0.27	0.50	ug/l	5.00		88 70-130			
Chloromethane	3.73	0.23	0.50	ug/l	5.00		75 70-130			
cis-1,2-Dichloroethene	4.27	0.25	0.50	ug/l	5.00		85 70-130			
cis-1,3-Dichloropropene	4.50	0.30	0.50	ug/l	5.00		90 70-130			
Dibromochloromethane	4.76	0.20	0.50	ug/l	5.00		95 70-130			
Dibromomethane	4.50	0.20	0.50	ug/l	5.00		90 70-130			
Dichlorodifluoromethane (Freon 12)	4.18	0.45	0.50	ug/l	5.00		84 70-130			
Di-isopropyl ether	15.7	1.1	2.0	ug/l	20.0		79 70-130			
Ethyl tert-butyl ether	17.7	1.0	2.0	ug/l	20.0		88 70-130			
Ethylbenzene	4.37	0.21	0.50	ug/l	5.00		87 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)										
LCS (W4B2410-BS1)					Prepared & Analyzed: 02/29/24					
Freon 113	4.54	1.5	5.0	ug/l	5.00		91 70-130			J
Hexachlorobutadiene	5.48	0.40	0.50	ug/l	5.00		110 70-130			
Isopropylbenzene	4.43	0.18	0.50	ug/l	5.00		89 70-130			
m,p-Xylene	4.38	0.33	0.50	ug/l	5.00		88 70-130			
m-Dichlorobenzene	4.92	0.14	0.50	ug/l	5.00		98 70-130			
Methyl tert-butyl ether (MTBE)	17.9	0.94	2.0	ug/l	20.0		90 70-130			
Methylene chloride	3.87	0.30	0.50	ug/l	5.00		77 70-130			
Naphthalene	4.60	0.35	0.50	ug/l	5.00		92 70-130			
n-Butylbenzene	4.73	0.29	0.50	ug/l	5.00		95 70-130			
n-Propylbenzene	4.38	0.18	0.50	ug/l	5.00		88 70-130			
o-Dichlorobenzene	4.82	0.19	0.50	ug/l	5.00		96 70-130			
o-Xylene	4.44	0.20	0.50	ug/l	5.00		89 70-130			
p-Dichlorobenzene	5.01	0.18	0.50	ug/l	5.00		100 70-130			
p-Isopropyltoluene	4.66	0.25	0.50	ug/l	5.00		93 70-130			
sec-Butylbenzene	4.52	0.24	0.50	ug/l	5.00		90 70-130			
Styrene	4.62	0.19	0.50	ug/l	5.00		92 70-130			
Tert-amyl methyl ether	18.5	0.59	2.0	ug/l	20.0		92 70-130			
tert-Butylbenzene	4.57	0.18	0.50	ug/l	5.00		91 70-130			
Tetrachloroethene	4.98	0.18	0.50	ug/l	5.00		100 70-130			
Toluene	4.42	0.29	0.50	ug/l	5.00		88 70-130			
trans-1,2-Dichloroethene	4.24	0.26	0.50	ug/l	5.00		85 70-130			
trans-1,3-Dichloropropene	4.79	0.32	0.50	ug/l	5.00		96 70-130			
Trichloroethene	4.74	0.18	0.50	ug/l	5.00		95 70-130			
Trichlorofluoromethane	4.61	0.18	0.50	ug/l	5.00		92 70-130			
Vinyl chloride	3.95	0.18	0.50	ug/l	5.00		79 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	46.6			ug/l	50.0		93 70-130			
4-Bromofluorobenzene	46.2			ug/l	50.0		92 70-130			
LCS Dup (W4B2410-BSD1)					Prepared & Analyzed: 02/29/24					
1,1,1,2-Tetrachloroethane	4.74	0.24	0.50	ug/l	5.00		95 70-130	0.6	30	
1,1,1-Trichloroethane	4.54	0.26	0.50	ug/l	5.00		91 70-130	0.3	30	
1,1,2,2-Tetrachloroethane	4.42	0.20	0.50	ug/l	5.00		88 70-130	3	30	
1,1,2-Trichloroethane	4.51	0.19	0.50	ug/l	5.00		90 70-130	2	30	
1,1-Dichloroethane	4.37	0.27	0.50	ug/l	5.00		87 70-130	3	30	
1,1-Dichloroethene	4.17	0.16	0.50	ug/l	5.00		83 70-130	0.8	30	
1,1-Dichloropropene	4.24	0.14	0.50	ug/l	5.00		85 70-130	0.6	30	
1,2,3-Trichlorobenzene	5.22	0.40	0.50	ug/l	5.00		104 70-130	3	30	
1,2,3-Trichloropropane	4.83	0.22	0.50	ug/l	5.00		97 70-130	2	30	
1,2,4-Trichlorobenzene	5.69	0.17	0.50	ug/l	5.00		114 70-130	7	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)										
LCS Dup (W4B2410-BSD1)					Prepared & Analyzed: 02/29/24					
1,2,4-Trimethylbenzene	4.47	0.20	0.50	ug/l	5.00	89	70-130	2	30	
1,2-Dichloroethane	4.47	0.24	0.50	ug/l	5.00	89	70-130	4	30	
1,2-Dichloropropane	4.22	0.13	0.50	ug/l	5.00	84	70-130	3	30	
1,3,5-Trimethylbenzene	4.38	0.17	0.50	ug/l	5.00	88	70-130	3	30	
1,3-Dichloropropane	4.64	0.27	0.50	ug/l	5.00	93	70-130	5	30	
2,2-Dichloropropane	5.02	0.17	0.50	ug/l	5.00	100	70-130	1	30	
2-Butanone	3.95	1.5	5.0	ug/l	5.00	79	70-130	6	30	J
2-Chlorotoluene	4.80	0.15	0.50	ug/l	5.00	96	70-130	3	30	
2-Hexanone	4.53	1.2	5.0	ug/l	5.00	91	70-130	3	30	J
4-Chlorotoluene	4.77	0.15	0.50	ug/l	5.00	95	70-130	2	30	
4-Methyl-2-pentanone	4.59	1.8	5.0	ug/l	5.00	92	70-130	7	30	J
Acetone	42.6	3.1	5.0	ug/l	50.0	85	70-130	7	30	
Benzene	4.48	0.15	0.50	ug/l	5.00	90	70-130	2	30	
Bromobenzene	4.94	0.15	0.50	ug/l	5.00	99	70-130	2	30	
Bromochloromethane	4.21	0.15	0.50	ug/l	5.00	84	70-130	5	30	
Bromodichloromethane	4.37	0.24	0.50	ug/l	5.00	87	70-130	0.3	30	
Bromoform	5.27	0.38	0.50	ug/l	5.00	105	70-130	3	30	
Bromomethane	4.48	0.27	0.50	ug/l	5.00	90	70-130	2	30	
Carbon Disulfide	4.26	0.25	0.50	ug/l	5.00	85	70-130	0.6	30	
Carbon tetrachloride	4.64	0.27	0.50	ug/l	5.00	93	70-130	1	30	
Chlorobenzene	5.20	0.15	0.50	ug/l	5.00	104	70-130	6	30	
Chloroethane	4.10	0.17	0.50	ug/l	5.00	82	70-130	0.9	30	
Chloroform	4.42	0.27	0.50	ug/l	5.00	88	70-130	1	30	
Chloromethane	3.72	0.23	0.50	ug/l	5.00	74	70-130	0.3	30	
cis-1,2-Dichloroethene	4.32	0.25	0.50	ug/l	5.00	86	70-130	1	30	
cis-1,3-Dichloropropene	4.54	0.30	0.50	ug/l	5.00	91	70-130	0.9	30	
Dibromochloromethane	4.95	0.20	0.50	ug/l	5.00	99	70-130	4	30	
Dibromomethane	4.60	0.20	0.50	ug/l	5.00	92	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	4.14	0.45	0.50	ug/l	5.00	83	70-130	1	30	
Di-isopropyl ether	16.6	1.1	2.0	ug/l	20.0	83	70-130	6	30	
Ethyl tert-butyl ether	18.6	1.0	2.0	ug/l	20.0	93	70-130	5	30	
Ethylbenzene	4.37	0.21	0.50	ug/l	5.00	87	70-130	0.1	30	
Freon 113	4.50	1.5	5.0	ug/l	5.00	90	70-130	0.9	30	J
Hexachlorobutadiene	5.30	0.40	0.50	ug/l	5.00	106	70-130	3	30	
Isopropylbenzene	4.41	0.18	0.50	ug/l	5.00	88	70-130	0.5	30	
m,p-Xylene	4.34	0.33	0.50	ug/l	5.00	87	70-130	1	30	
m-Dichlorobenzene	4.86	0.14	0.50	ug/l	5.00	97	70-130	1	30	
Methyl tert-butyl ether (MTBE)	19.0	0.94	2.0	ug/l	20.0	95	70-130	6	30	
Methylene chloride	4.03	0.30	0.50	ug/l	5.00	81	70-130	4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2410 - EPA 524.2 (Continued)											
LCS Dup (W4B2410-BSD1)					Prepared & Analyzed: 02/29/24						
Naphthalene	4.96	0.35	0.50	ug/l	5.00		99	70-130	8	30	
n-Butylbenzene	4.61	0.29	0.50	ug/l	5.00		92	70-130	3	30	
n-Propylbenzene	4.25	0.18	0.50	ug/l	5.00		85	70-130	3	30	
o-Dichlorobenzene	4.80	0.19	0.50	ug/l	5.00		96	70-130	0.5	30	
o-Xylene	4.55	0.20	0.50	ug/l	5.00		91	70-130	2	30	
p-Dichlorobenzene	4.99	0.18	0.50	ug/l	5.00		100	70-130	0.5	30	
p-Isopropyltoluene	4.51	0.25	0.50	ug/l	5.00		90	70-130	3	30	
sec-Butylbenzene	4.36	0.24	0.50	ug/l	5.00		87	70-130	4	30	
Styrene	4.64	0.19	0.50	ug/l	5.00		93	70-130	0.6	30	
Tert-amyl methyl ether	19.2	0.59	2.0	ug/l	20.0		96	70-130	4	30	
tert-Butylbenzene	4.48	0.18	0.50	ug/l	5.00		90	70-130	2	30	
Tetrachloroethene	5.03	0.18	0.50	ug/l	5.00		101	70-130	1	30	
Toluene	4.48	0.29	0.50	ug/l	5.00		90	70-130	2	30	
trans-1,2-Dichloroethene	4.29	0.26	0.50	ug/l	5.00		86	70-130	1	30	
trans-1,3-Dichloropropene	4.97	0.32	0.50	ug/l	5.00		99	70-130	4	30	
Trichloroethene	4.71	0.18	0.50	ug/l	5.00		94	70-130	0.5	30	
Trichlorofluoromethane	4.51	0.18	0.50	ug/l	5.00		90	70-130	2	30	
Vinyl chloride	3.98	0.18	0.50	ug/l	5.00		80	70-130	0.8	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	45.3			ug/l	50.0		91	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - COPCs

Reported:
 03/28/2024 12:18

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Source Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20058

Project: COSM 97-005 - DDW Standards

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 4/04/2024

Received Date: 2/16/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

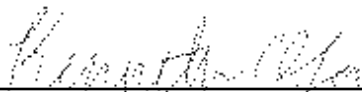
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/16/24 with the Chain-of-Custody document. The samples were received in good condition, at 13.3 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-5-S22	Client	4B20058-01	Water	02/16/24 13:40	
Field Blank	Client	4B20058-02	Water	02/16/24 13:40	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 1613B in Water				
2,3,7,8-TCDD (Dioxin)	1746-01-6		⊗	
EPA 508.1 in Water				
Aldrin	309-00-2	⊗		⊗
alpha-BHC	319-84-6	⊗		⊗
beta-BHC	319-85-7	⊗		⊗
delta-BHC	319-86-8	⊗		⊗
gamma-BHC (Lindane)	58-89-9			⊗
4,4'-DDD	72-54-8	⊗		⊗
4,4'-DDE	72-55-9	⊗		⊗
4,4'-DDT	50-29-3	⊗		⊗
Dieldrin	60-57-1	⊗		⊗
Endosulfan I	959-98-8	⊗		⊗
Endosulfan II	33213-65-9	⊗		⊗
Endosulfan sulfate	1031-07-8	⊗		⊗
Endrin aldehyde	7421-93-4	⊗		⊗
Chlorothalonil	1897-45-6	⊗	⊗	⊗
Trifluralin	1582-09-8	⊗		⊗
Toxaphene	8001-35-2			⊗
PCBs, Total				⊗
EPA 515.4 in Water				
3,5-Dichlorobenzoic acid	51-36-5	⊗		⊗
Dichloroprop	120-36-5	⊗		⊗
2,4,5-T	93-76-5	⊗		⊗
2,4-DB	94-82-6	⊗		⊗
DCPA	1861-32-1	⊗		⊗
Acifluorfen	50594-66-6	⊗		⊗
Chloramben	133-90-4	⊗	⊗	⊗
EPA 521 in Water				
N-Nitrosodimethylamine	62-75-9	⊗	⊗	⊗
N-Nitrosomethylethylamine	10595-95-6	⊗	⊗	⊗
N-Nitrosodiethylamine	55-18-5	⊗	⊗	⊗
N-Nitrosodi-n-propylamine	621-64-7	⊗	⊗	⊗
N-Nitrosomorpholine	59-89-2	⊗	⊗	⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 521 in Water (Continued)				
N-Nitrosopyrrolidine	930-55-2	⊗	⊗	⊗
N-Nitrosopiperidine	100-75-4	⊗	⊗	⊗
N-Nitrosodi-n-butylamine	924-16-3	⊗	⊗	⊗
NDMA-d6		⊗	⊗	⊗
EPA 524.2 in Water				
Chloromethane	74-87-3	⊗	⊗	⊗
Bromomethane	74-83-9	⊗		⊗
Chloroethane	75-00-3	⊗		⊗
Di-isopropyl ether	108-20-3	⊗		⊗
2-Butanone	78-93-3			⊗
2,2-Dichloropropane	594-20-7	⊗		⊗
Bromochloromethane	74-97-5	⊗		⊗
1,1-Dichloropropene	563-58-6	⊗		⊗
Dibromomethane	74-95-3	⊗		⊗
1,3-Dichloropropane	142-28-9	⊗		⊗
2-Hexanone	591-78-6	⊗		⊗
Bromobenzene	108-86-1	⊗		⊗
1,2,3-Trichloropropane	96-18-4	⊗		⊗
1,3,5-Trimethylbenzene	108-67-8			⊗
p-Isopropyltoluene	99-87-6	⊗	⊗	⊗
Hexachlorobutadiene	87-68-3	⊗		⊗
1,3-Dichloropropene, Total	542-75-6	⊗	⊗	⊗
Acetone	67-64-1	⊗		⊗
Acrolein	107-02-8	⊗		⊗
Acrylonitrile	107-13-1	⊗		⊗
Acetonitrile	75-05-8	⊗	⊗	⊗
Vinyl acetate	108-05-4	⊗		⊗
Nitrobenzene	98-95-3	⊗		⊗
Allyl chloride	107-05-1	⊗		⊗
Iodomethane	74-88-4	⊗		⊗
Methyl methacrylate	80-62-6	⊗		⊗
Tetrahydrofuran	109-99-9	⊗		⊗
Methacrylonitrile	126-98-7	⊗		⊗
Ethyl methacrylate	97-63-2	⊗		⊗
trans-1,4-Dichloro-2-butene	110-57-6	⊗		⊗
Pentachloroethane	76-01-7	⊗		⊗
EPA 525.2 in Water				

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 525.2 in Water (Continued)				
Bromacil	314-40-9	⊗		⊗
Captan	133-06-2	⊗	⊗	⊗
Chlorpropham	101-21-3	⊗		⊗
Diazinon	333-41-5	⊗		⊗
Dimethoate	60-51-5	⊗	⊗	⊗
Diphenamid	957-51-7	⊗		⊗
Disulfoton	298-04-4	⊗		⊗
EPTC	759-94-4	⊗		⊗
Metolachlor	51218-45-2	⊗		⊗
Metribuzin	21087-64-9	⊗		⊗
Prometryn	7287-19-6	⊗		⊗
Terbacil	5902-51-2	⊗		⊗
Trithion	786-19-6	⊗	⊗	⊗
EPA 531.2 in Water				
Propoxur (Baygon)	114-26-1	⊗		⊗
Methiocarb	2032-65-7	⊗		⊗
EPA 556 in Water				
Formaldehyde	50-00-0	⊗	⊗	⊗
2,4,5-TFAP	129322-83-4	⊗	⊗	⊗
EPA 8015B in Water				
Ethylene glycol	107-21-1	⊗		⊗
EPA 8330A in Water				
HMX	2691-41-0	⊗		⊗
RDX	121-82-4	⊗		⊗
1,3,5-Trinitrobenzene	99-35-4			⊗
1,3-Dinitrobenzene	99-65-0			⊗
Nitrobenzene	98-95-3			⊗
Tetryl	479-45-8	⊗		⊗
2,4,6-Trinitrotoluene	118-96-7			⊗
4-Amino-2,6-Dinitrotoluene	19406-51-0	⊗	⊗	⊗
2-Amino-4,6-Dinitrotoluene	35572-78-2	⊗		⊗
2,6-Dinitrotoluene	606-20-2			⊗
2,4-Dinitrotoluene	121-14-2			⊗
2-Nitrotoluene	88-72-2			⊗
4-Nitrotoluene	99-99-0			⊗
3-Nitrotoluene	99-08-1			⊗
EPA 900.0 in Water				



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 900.0 in Water (Continued)				
Gross Alpha			⊗	
Gross Beta			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Aldehydes and Carbonyl Compounds by GC/ECD							
Method: EPA 556			Instr: GC08				
Batch ID: W4B1809		Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08	
Formaldehyde	9.7	0.86	2.0	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
2,4,5-TFAP	93%	Conc: 19.2	70-130			03/02/24	

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 531.2			Instr: LC11				
Batch ID: W4B2044		Preparation: _NONE (LC)		Prepared: 02/25/24 10:29		Analyst: cam	
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l	1	02/26/24	
Aldicarb	ND	0.58	2.0	ug/l	1	02/26/24	
Aldicarb sulfone	ND	0.73	2.0	ug/l	1	02/26/24	
Aldicarb sulfoxide	ND	1.0	2.0	ug/l	1	02/26/24	
Carbaryl	ND	1.0	2.0	ug/l	1	02/26/24	
Carbofuran	ND	1.0	2.0	ug/l	1	02/26/24	
Methiocarb	ND	1.0	2.0	ug/l	1	02/26/24	
Methomyl	ND	1.3	2.0	ug/l	1	02/26/24	
Oxamyl	ND	1.1	2.0	ug/l	1	02/26/24	
Propoxur (Baygon)	ND	1.4	2.0	ug/l	1	02/26/24	
<i>Surrogate(s)</i>							
BDMC	114%	Conc: 11.4	70-130			02/26/24	

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 515.4			Instr: GC08				
Batch ID: W4B2149		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/27/24 08:15		Analyst: alf	
2,4,5-T	ND	0.065	0.20	ug/l	1	03/12/24	
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l	1	03/12/24	
2,4-D	ND	0.14	0.40	ug/l	1	03/12/24	
2,4-DB	ND	0.19	2.0	ug/l	1	03/12/24	
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l	1	03/12/24	
Acifluorfen	ND	0.030	0.40	ug/l	1	03/12/24	
Bentazon	ND	0.23	2.0	ug/l	1	03/12/24	
Dalapon	ND	0.11	0.40	ug/l	1	03/12/24	
DCPA	ND	0.029	0.10	ug/l	1	03/12/24	
Dicamba	ND	0.15	0.60	ug/l	1	03/12/24	
Dichloroprop	ND	0.12	0.30	ug/l	1	03/12/24	
Dinoseb	ND	0.033	0.40	ug/l	1	03/12/24	
Pentachlorophenol	ND	0.014	0.20	ug/l	1	03/12/24	
Picloram	ND	0.050	0.60	ug/l	1	03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Acids Herbicides by GC/ECD (Continued)							
Method: EPA 515.4				Instr: GC08			
Batch ID: W4B2149		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/27/24 08:15		Analyst: alf	
<i>Surrogate(s)</i>							
2,4-DCAA	97%	Conc: 9.69	70-130			03/12/24	

Chlorinated Pesticides and/or PCBs by GC/ECD

Method: EPA 508.1				Instr: GC08			
Batch ID: W4B2423		Preparation: EPA 508.1/SPE		Prepared: 02/29/24 08:34		Analyst: alf	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	03/06/24	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
4,4'-DDT	ND	0.0030	0.010	ug/l	1	03/06/24	
Aldrin	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
alpha-BHC	ND	0.0015	0.010	ug/l	1	03/06/24	
Aroclor 1016	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1221	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1232	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1242	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1248	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1254	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1260	ND	0.10	0.10	ug/l	1	03/06/24	Q-02
beta-BHC	ND	0.010	0.010	ug/l	1	03/06/24	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	03/06/24	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	03/06/24	
delta-BHC	ND	0.0030	0.010	ug/l	1	03/06/24	
Dieldrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endosulfan I	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endosulfan II	ND	0.0019	0.010	ug/l	1	03/06/24	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	03/06/24	
Heptachlor	ND	0.0031	0.010	ug/l	1	03/06/24	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	03/06/24	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	03/06/24	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	03/06/24	
Methoxychlor	ND	0.0030	0.010	ug/l	1	03/06/24	
PCBs, Total	ND	0.10	0.50	ug/l	1	03/06/24	
Propachlor	ND	0.045	0.20	ug/l	1	03/06/24	

4B20058

Page 7 of 54

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1

Instr: GC08

Batch ID: W4B2423

Preparation: EPA 508.1/SPE

Prepared: 02/29/24 08:34

Analyst: alf

Toxaphene ND 0.37 1.0 ug/l 1 03/06/24

Trifluralin ND 0.0043 0.010 ug/l 1 03/06/24

Surrogate(s)

4,4-Dibromobiphenyl 102% Conc: 0.0977 70-130 03/06/24

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 335.4

Instr: AA01

Batch ID: W4B2277

Preparation: _NONE (WETCHEM)

Prepared: 02/27/24 19:14

Analyst: KAC

Cyanide, Total ND 5.0 5.0 ug/l 1 02/28/24

Diquat and Paraquat by EPA 549.2

Method: EPA 549.2

Instr: LC10

Batch ID: W4B1814

Preparation: EPA 549.2/SPE

Prepared: 02/22/24 08:48

Analyst: cam

Diquat ND 1.2 4.0 ug/l 1 02/28/24

Endothall By EPA 548.1

Method: EPA 548.1

Instr: GCMS06

Batch ID: W4B1800

Preparation: EPA 548.1/SPE

Prepared: 02/22/24 07:49

Analyst: rmr

Endothall ND 11 45 ug/l 1 02/27/24

Explosives by EPA Method 8330

Method: EPA 8330A

Instr: LC10

Batch ID: W4B1813

Preparation: Method (SPE)

Prepared: 02/23/24 08:46

Analyst: cam

1,3,5-Trinitrobenzene ND 0.31 1.0 ug/l 1 03/13/24

1,3-Dinitrobenzene ND 0.15 1.0 ug/l 1 03/13/24

2,4,6-Trinitrotoluene ND 0.34 1.0 ug/l 1 03/13/24

2,4-Dinitrotoluene ND 0.34 1.0 ug/l 1 03/13/24

2,6-Dinitrotoluene ND 0.20 1.0 ug/l 1 03/13/24

2-Amino-4,6-Dinitrotoluene ND 0.35 1.0 ug/l 1 03/13/24

2-Nitrotoluene ND 0.21 1.0 ug/l 1 03/13/24

3-Nitrotoluene ND 0.37 1.0 ug/l 1 03/13/24

4-Amino-2,6-Dinitrotoluene ND 0.17 1.0 ug/l 1 03/13/24

4-Nitrotoluene ND 0.27 1.0 ug/l 1 03/13/24

HMX ND 0.30 1.0 ug/l 1 03/13/24

Nitrobenzene ND 0.16 1.0 ug/l 1 03/13/24

RDX ND 0.33 1.0 ug/l 1 03/13/24

Tetryl ND 0.45 1.0 ug/l 1 03/13/24

Glycols by GC/FID

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Glycols by GC/FID (Continued)

Method: EPA 8015B

Instr: GC09

Batch ID: W4B1920

Preparation: _NONE (SVOC)

Prepared: 02/22/24 16:00

Analyst: alf

Ethylene glycol ND 4.7 10 mg/l 1 02/22/24

Surrogate(s)

1-Propanol 110% Conc: 110 50-150 02/22/24

Glyphosate by EPA 547

Method: EPA 547

Instr: LC11

Batch ID: W4B2068

Preparation: _NONE (LC)

Prepared: 02/26/24 08:52

Analyst: cam

Glyphosate ND 1.8 5.0 ug/l 1 02/27/24

Haloacetic Acids (HAAs) by GC/ECD

Method: EPA 552.3

Instr: GC05

Batch ID: W4B1637

Preparation: EPA 552.3/Micro Ext. Drtz

Prepared: 02/21/24 08:38

Analyst: ecs

Dibromoacetic acid (dbaa) 0.77 0.28 1.0 ug/l 1 03/05/24

Dichloroacetic acid (dcaa) ND 0.29 1.0 ug/l 1 03/05/24

Monobromoacetic acid (mbaa) ND 0.34 1.0 ug/l 1 03/05/24

Monochloroacetic acid (mcaa) ND 0.31 2.0 ug/l 1 03/05/24

Trichloroacetic acid (tcaa) ND 0.29 1.0 ug/l 1 03/05/24

Surrogate(s)

2-Bromobutyric acid 104% Conc: 10.4 70-130 03/05/24

Metals by EPA 200 Series Methods

Method: EPA 245.1

Instr: HG03

Batch ID: W4C0568

Preparation: EPA 245.1

Prepared: 03/07/24 14:21

Analyst: KVM

Mercury, Total ND 0.037 0.050 ug/l 1 03/12/24

Nitrosamines by CI GC/MS/MS, EPA 521

Method: EPA 521

Instr: GCMS09

Batch ID: W4B2291

Preparation: EPA 521/SPE

Prepared: 02/28/24 08:04

Analyst: mld

N-Nitrosodiethylamine ND 0.66 2.0 ng/l 1 03/01/24

N-Nitrosodimethylamine ND 1.3 2.0 ng/l 1 03/01/24

N-Nitrosodi-n-butylamine ND 0.53 2.0 ng/l 1 03/01/24

N-Nitrosodi-n-propylamine ND 0.62 2.0 ng/l 1 03/01/24

N-Nitrosomethylethylamine ND 0.54 2.0 ng/l 1 03/01/24

N-Nitrosomorpholine ND 0.68 2.0 ng/l 1 03/01/24

N-Nitrosopiperidine ND 0.65 2.0 ng/l 1 03/01/24

N-Nitrosopyrrolidine ND 0.62 2.0 ng/l 1 03/01/24

Surrogate(s)

NDMA-d6 110% Conc: 28.1 70-130 03/01/24

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

4B20058

Page 9 of 54

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0509

Preparation: EPA 533/SPE

Prepared: 03/07/24 09:21

Analyst: ajc

11CI-PF3OUdS	ND	0.75	1.7	ng/l	1	03/10/24	
4:2 FTS	ND	0.70	1.7	ng/l	1	03/10/24	
6:2 FTS	ND	0.66	1.7	ng/l	1	03/10/24	
8:2 FTS	ND	0.57	1.7	ng/l	1	03/10/24	
9CI-PF3ONS	ND	0.71	1.7	ng/l	1	03/10/24	
ADONA	ND	0.60	1.7	ng/l	1	03/10/24	
HFPO-DA	ND	0.78	1.7	ng/l	1	03/10/24	
NFDHA	ND	0.63	1.7	ng/l	1	03/10/24	
PFBA	ND	0.51	1.7	ng/l	1	03/10/24	
PFBS	ND	0.39	1.7	ng/l	1	03/10/24	
PFDA	ND	0.54	1.7	ng/l	1	03/10/24	
PFDoA	ND	0.55	1.7	ng/l	1	03/10/24	
PFEESA	ND	0.38	1.7	ng/l	1	03/10/24	
PFHpA	ND	0.55	1.7	ng/l	1	03/10/24	
PFHpS	ND	0.51	1.7	ng/l	1	03/10/24	
PFHxA	ND	0.61	1.7	ng/l	1	03/10/24	
PFHxS	ND	0.84	1.7	ng/l	1	03/10/24	
PFMBA	ND	0.52	1.7	ng/l	1	03/10/24	
PFMPA	ND	0.35	1.7	ng/l	1	03/10/24	
PFNA	ND	0.74	1.7	ng/l	1	03/10/24	
PFOA	ND	0.78	1.7	ng/l	1	03/10/24	
PFOS	ND	0.58	1.7	ng/l	1	03/10/24	
PFPeA	ND	0.38	1.7	ng/l	1	03/10/24	
PFPeS	ND	0.42	1.7	ng/l	1	03/10/24	
PFUnA	ND	0.50	1.7	ng/l	1	03/10/24	

Surrogate(s)

13C2-4:2 FTS	93%	Conc: 31.5	50-200	03/10/24
13C2-6:2 FTS	98%	Conc: 32.9	50-200	03/10/24
13C2-8:2 FTS	96%	Conc: 32.5	50-200	03/10/24
13C2-PFDoA	94%	Conc: 7.91	50-200	03/10/24
13C3-PFBS	107%	Conc: 9.08	50-200	03/10/24
13C3-PFHxS	107%	Conc: 9.05	50-200	03/10/24
13C4-PFBA	107%	Conc: 9.06	50-200	03/10/24
13C4-PFHpA	99%	Conc: 8.40	50-200	03/10/24
13C5-PFHxA	100%	Conc: 8.45	50-200	03/10/24

4B20058

Page 10 of 54

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0509		Preparation: EPA 533/SPE		Prepared: 03/07/24 09:21		Analyst: ajc	
13C5-PFPeA	105%	Conc: 8.88	50-200			03/10/24	
13C6-PFDA	94%	Conc: 7.98	50-200			03/10/24	
13C7-PFUnA	93%	Conc: 7.87	50-200			03/10/24	
13C8-PFOA	96%	Conc: 8.12	50-200			03/10/24	
13C8-PFOS	109%	Conc: 9.24	50-200			03/10/24	
13C9-PFNA	98%	Conc: 8.29	50-200			03/10/24	
HFPO-DA-13C3	96%	Conc: 8.12	50-200			03/10/24	

Perchlorate by EPA 314.0

Method: EPA 314.0			Instr: LC08_Channel1				
Batch ID: W4B1668		Preparation: _NONE (LC)		Prepared: 02/21/24 10:28		Analyst: CLL	
Perchlorate	ND	0.26	1.0	ug/l	1	02/22/24	

Radiological Parameters by APHA/EPA Methods

Method: EPA 900.0			Instr: RAD02				
Batch ID: W4C0565		Preparation: _NONE (RADIOCHEM)		Prepared: 03/07/24 12:40		Analyst: ela	
Gross Alpha	0.434			pCi/L	1	03/15/24	
Counting Uncertainty: 0.457		MDA: 0.766					
Gross Beta	0.733			pCi/L	1	03/15/24	
Counting Uncertainty: 0.762		MDA: 1.272					

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2			Instr: GCMS16				
Batch ID: W4B2424		Preparation: EPA 525.2/SPE		Prepared: 02/29/24 08:39		Analyst: rmr	
Alachlor	ND	0.063	0.10	ug/l	1	03/09/24	
Atrazine	ND	0.042	0.10	ug/l	1	03/09/24	
Benzo (a) pyrene	ND	0.045	0.10	ug/l	1	03/09/24	
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l	1	03/09/24	
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l	1	03/09/24	
Bromacil	ND	0.24	0.50	ug/l	1	03/09/24	
Butachlor	ND	0.040	0.10	ug/l	1	03/09/24	
Captan	ND	0.32	1.0	ug/l	1	03/09/24	
Chlorpropham	ND	0.040	0.10	ug/l	1	03/09/24	
Diazinon	ND	0.022	0.10	ug/l	1	03/09/24	
Dimethoate	ND	0.041	0.20	ug/l	1	03/09/24	
Diphenamid	ND	0.030	0.10	ug/l	1	03/09/24	
Disulfoton	ND	0.11	0.20	ug/l	1	03/09/24	
EPTC	ND	0.020	0.10	ug/l	1	03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Semivolatile Organic Compounds by GC/MS (Continued)

Method: EPA 525.2

Instr: GCMS16

Batch ID: W4B2424

Preparation: EPA 525.2/SPE

Prepared: 02/29/24 08:39

Analyst: rmr

Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l	1	03/09/24	
Metolachlor	ND	0.030	0.10	ug/l	1	03/09/24	
Metribuzin	ND	0.030	0.10	ug/l	1	03/09/24	
Molinate	ND	0.030	0.10	ug/l	1	03/09/24	
Prometryn	ND	0.030	0.10	ug/l	1	03/09/24	
Simazine	ND	0.058	0.10	ug/l	1	03/09/24	
Terbacil	ND	0.090	2.0	ug/l	1	03/09/24	
Thiobencarb	ND	0.069	0.10	ug/l	1	03/09/24	
Trithion	ND	0.054	0.10	ug/l	1	03/09/24	

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	117%	Conc: 5.55	70-130			03/09/24	
Perylene-d12	73%	Conc: 3.46	50-120			03/09/24	
Triphenyl phosphate	76%	Conc: 3.62	70-130			03/09/24	

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 1613B

Instr: GCMS15

Batch ID: W4C1219

Preparation: EPA 3510C

Prepared: 03/15/24 08:13

Analyst: AJC

2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	1	03/21/24	
-----------------------	----	------	------	------	---	----------	--

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B1715

Preparation: EPA 5030B

Prepared: 02/21/24 12:34

Analyst: ADM

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	02/22/24	
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	02/22/24	
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	02/22/24	
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	02/22/24	
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	02/22/24	
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	02/22/24	
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	02/22/24	
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	02/22/24	
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	02/22/24	
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	02/22/24	
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	02/22/24	
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	02/22/24	
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	02/22/24	
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	02/22/24	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	02/22/24	

4B20058

Page 12 of 54

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B1715		Preparation: EPA 5030B		Prepared: 02/21/24 12:34		Analyst: ADM	
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	02/22/24	
2-Butanone	ND	1.5	5.0	ug/l	1	02/22/24	
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/22/24	
2-Hexanone	ND	1.2	5.0	ug/l	1	02/22/24	
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	02/22/24	
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	02/22/24	
Acetone	820	3.1	5.0	ug/l	1	02/22/24	E-01
Benzene	ND	0.15	0.50	ug/l	1	02/22/24	
Bromobenzene	ND	0.15	0.50	ug/l	1	02/22/24	
Bromochloromethane	ND	0.15	0.50	ug/l	1	02/22/24	
Bromodichloromethane	ND	0.24	0.50	ug/l	1	02/22/24	
Bromoform	ND	0.38	0.50	ug/l	1	02/22/24	
Bromomethane	ND	0.27	0.50	ug/l	1	02/22/24	
Carbon Disulfide	ND	0.25	0.50	ug/l	1	02/22/24	
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	02/22/24	
Chlorobenzene	ND	0.15	0.50	ug/l	1	02/22/24	
Chloroethane	ND	0.17	0.50	ug/l	1	02/22/24	
Chloroform	ND	0.27	0.50	ug/l	1	02/22/24	
Chloromethane	ND	0.23	0.50	ug/l	1	02/22/24	
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	02/22/24	
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	02/22/24	
Dibromochloromethane	ND	0.20	0.50	ug/l	1	02/22/24	
Dibromomethane	ND	0.20	0.50	ug/l	1	02/22/24	
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	02/22/24	
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	02/22/24	
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	02/22/24	
Ethylbenzene	ND	0.21	0.50	ug/l	1	02/22/24	
Freon 113	ND	1.5	5.0	ug/l	1	02/22/24	
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	02/22/24	
Isopropylbenzene	ND	0.18	0.50	ug/l	1	02/22/24	
m,p-Xylene	ND	0.33	0.50	ug/l	1	02/22/24	
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	02/22/24	
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	02/22/24	
Methylene chloride	ND	0.30	0.50	ug/l	1	02/22/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W4B1715

Preparation: EPA 5030B

Prepared: 02/21/24 12:34

Analyst: ADM

Naphthalene	ND	0.35	0.50	ug/l	1	02/22/24	
n-Butylbenzene	ND	0.29	0.50	ug/l	1	02/22/24	
n-Propylbenzene	ND	0.18	0.50	ug/l	1	02/22/24	
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	02/22/24	
o-Xylene	ND	0.20	0.50	ug/l	1	02/22/24	
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	02/22/24	
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	02/22/24	
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	02/22/24	
Styrene	ND	0.19	0.50	ug/l	1	02/22/24	
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	02/22/24	
Tert-butyl alcohol	ND	0.45	2.0	ug/l	1	02/22/24	
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	02/22/24	
Tetrachloroethene	ND	0.18	0.50	ug/l	1	02/22/24	
THMs, Total	ND		0.50	ug/l	1	02/22/24	
Toluene	ND	0.29	0.50	ug/l	1	02/22/24	
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	02/22/24	
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	02/22/24	
Trichloroethene	ND	0.18	0.50	ug/l	1	02/22/24	
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	02/22/24	
Vinyl chloride	ND	0.18	0.50	ug/l	1	02/22/24	
Xylenes, Total	ND		0.50	ug/l	1	02/22/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	81%	Conc: 40.7	70-130			02/22/24	
4-Bromofluorobenzene	83%	Conc: 41.6	70-130			02/22/24	

Volatile Organics by P&T and GC/MS

Method: EPA 524.3

Instr: GCMS04

Batch ID: W4B2414

Preparation: Method (P+T)

Prepared: 02/29/24 07:37

Analyst: ADM

1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l	1	02/29/24	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	107%	Conc: 0.429	70-130			02/29/24	
4-Bromofluorobenzene	105%	Conc: 0.419	70-130			02/29/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:40 by Client

4B20058-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			Instr: GCMS14				
Batch ID: W4B2189		Preparation: EPA 5030B			Prepared: 02/27/24 12:08		Analyst: ADM
Acetonitrile	ND		1.0	ug/l	1	02/28/24	
Acrolein	ND	1.9	5.0	ug/l	1	02/28/24	
Acrylonitrile	ND	1.5	2.0	ug/l	1	02/28/24	
Allyl chloride	ND	0.17	0.50	ug/l	1	02/28/24	
Ethyl methacrylate	ND	0.51	5.0	ug/l	1	02/28/24	
Iodomethane	ND	0.11	0.50	ug/l	1	02/28/24	
Methacrylonitrile	ND	0.17	0.50	ug/l	1	02/28/24	
Methyl methacrylate	ND	0.080	0.50	ug/l	1	02/28/24	
Nitrobenzene	ND	2.6	10	ug/l	1	02/28/24	
Pentachloroethane	ND	3.6	5.0	ug/l	1	02/28/24	
Tetrahydrofuran	ND	0.58	5.0	ug/l	1	02/28/24	
trans-1,4-Dichloro-2-butene	ND	0.17	0.50	ug/l	1	02/28/24	
Vinyl acetate	ND	1.0	5.0	ug/l	1	02/28/24	
<i>Surrogate(s)</i>							
1,2-Dichlorobenzene-d4	106%	Conc: 52.9	70-130			02/28/24	
4-Bromofluorobenzene	106%	Conc: 53.2	70-130			02/28/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/16/24 13:40 by Client

4B20058-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0509

Preparation: EPA 533/SPE

Prepared: 03/07/24 09:21

Analyst: ajc

11CI-PF3OUdS	ND	0.71	1.6	ng/l	1	03/10/24	
4:2 FTS	ND	0.67	1.6	ng/l	1	03/10/24	
6:2 FTS	ND	0.63	1.6	ng/l	1	03/10/24	
8:2 FTS	ND	0.54	1.6	ng/l	1	03/10/24	
9CI-PF3ONS	ND	0.68	1.6	ng/l	1	03/10/24	
ADONA	ND	0.57	1.6	ng/l	1	03/10/24	
HFPO-DA	ND	0.74	1.6	ng/l	1	03/10/24	
NFDHA	ND	0.60	1.6	ng/l	1	03/10/24	
PFBA	ND	0.49	1.6	ng/l	1	03/10/24	
PFBS	ND	0.37	1.6	ng/l	1	03/10/24	
PFDA	ND	0.52	1.6	ng/l	1	03/10/24	
PFDoA	ND	0.52	1.6	ng/l	1	03/10/24	
PFEESA	ND	0.36	1.6	ng/l	1	03/10/24	
PFHpA	ND	0.52	1.6	ng/l	1	03/10/24	
PFHpS	ND	0.48	1.6	ng/l	1	03/10/24	
PFHxA	ND	0.58	1.6	ng/l	1	03/10/24	
PFHxS	ND	0.80	1.6	ng/l	1	03/10/24	
PFMBA	ND	0.50	1.6	ng/l	1	03/10/24	
PFMPA	ND	0.34	1.6	ng/l	1	03/10/24	
PFNA	ND	0.71	1.6	ng/l	1	03/10/24	
PFOA	ND	0.74	1.6	ng/l	1	03/10/24	
PFOS	ND	0.55	1.6	ng/l	1	03/10/24	
PFPeA	ND	0.36	1.6	ng/l	1	03/10/24	
PFPeS	ND	0.40	1.6	ng/l	1	03/10/24	
PFUnA	ND	0.48	1.6	ng/l	1	03/10/24	

Surrogate(s)

13C2-4:2 FTS	105%	Conc: 34.0	50-200	03/10/24
13C2-6:2 FTS	101%	Conc: 32.6	50-200	03/10/24
13C2-8:2 FTS	101%	Conc: 32.6	50-200	03/10/24
13C2-PFDoA	106%	Conc: 8.57	50-200	03/10/24
13C3-PFBS	110%	Conc: 8.90	50-200	03/10/24
13C3-PFHxS	108%	Conc: 8.73	50-200	03/10/24
13C4-PFBA	113%	Conc: 9.14	50-200	03/10/24
13C4-PFHpA	108%	Conc: 8.67	50-200	03/10/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/16/24 13:40 by Client

4B20058-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0509		Preparation: EPA 533/SPE		Prepared: 03/07/24 09:21		Analyst: ajc	
13C5-PFHxA	102%	Conc: 8.26	50-200			03/10/24	
13C5-PFPeA	113%	Conc: 9.13	50-200			03/10/24	
13C6-PFDA	106%	Conc: 8.53	50-200			03/10/24	
13C7-PFUnA	104%	Conc: 8.40	50-200			03/10/24	
13C8-PFOA	108%	Conc: 8.68	50-200			03/10/24	
13C8-PFOS	116%	Conc: 9.39	50-200			03/10/24	
13C9-PFNA	106%	Conc: 8.55	50-200			03/10/24	
HFPO-DA-13C3	101%	Conc: 8.15	50-200			03/10/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards
Project Manager: Brown & Caldwell

Reported:
04/04/2024 08:37

Sample Results GEL Laboratories, LLC

Sample: AT-RES-5-S22 4B20058-01 (Water) Sampled: 02/16/24 13:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 903.1							
Method: EPA 903.1	Batch ID: 2575902	Prepared: 03/19/24 00:00		Analyst: MJ2			
Radium-226	0.145			pCi/L	1	03/19/24	U
Uncertainty: 0.130	MDA: 0.155						

EPA 904.0/ EPA 9320							
Method: EPA 904.0/ EPA 9320	Batch ID: 2575966	Prepared: 03/19/24 00:00		Analyst: JE1			
Radium-228	-0.0962			pCi/L	1	03/19/24	U
Uncertainty: 0.530	MDA: 0.993						

<i>Surrogate(s)</i>							
<i>Barium Carrier</i>	100%		25-125			03/19/24	
<i>Yttrium Carrier</i>	46.1%		25-125			03/19/24	

EPA 905.0							
Method: EPA 905.0	Batch ID: 2573130	Prepared: 02/29/24 00:00		Analyst: ST2			
Strontium-90	0.0151			pCi/L	1	02/29/24	U
Uncertainty: 0.918	MDA: 1.72						

<i>Surrogate(s)</i>							
<i>Strontium Carrier</i>	85.6%		25-125			02/29/24	

EPA 906.0							
Method: EPA 906.0	Batch ID: 2573168	Prepared: 03/07/24 00:00		Analyst: HB2			
Tritium	320			pCi/L	1	03/07/24	U
Uncertainty: 370	MDA: 622						

Sample Results LA Testing - EMSL Analytical, Inc. CA-ELAP #2283, Non-NELAP

Sample: AT-RES-5-S22 4B20058-01 (Water) Sampled: 02/16/24 13:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 100.2							
Method: EPA 100.2	Batch ID: 322404611	Prepared: 02/23/24 11:20		Analyst: _SUB			
Asbestos	ND		0.20	MFL	1	03/07/24	
Fibers:	Area: 0.064	Confidence: 0.00-0.74					

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

EPA 903.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2575902 - EPA 903.1										
Blank (1205664148-BLK)										
Radium-226	0.0504	1.00	pCi/L				-			U
Uncertainty: 0.140		MDA: 0.279								
Duplicate (1205664149 D)										
Radium-226	0.0650	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.0919		MDA: 0.152								
Matrix Spike (1205664150 S)										
Radium-226	12.1	1.00	pCi/L	14.4	<	84.2	80-120			
Uncertainty: 1.03		MDA: 0.196								
BS (1205664151-BKS)										
Radium-226	14.9	1.00	pCi/L	14.4		104	90-110			
Uncertainty: 1.43		MDA: 0.249								

Quality Control Results

EPA 904.0/ EPA 9320

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2575966 - EPA 904.0/ EPA 9320										
Blank (1205664358-BLK)										
Radium-228	-0.0154	1.00	pCi/L				-			U
Uncertainty: 0.383		MDA: 0.713								
Duplicate (1205664359 D)										
Radium-228	0.172	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.263		MDA: 0.460								
Matrix Spike (1205664360 S)										
Radium-228	11.8	1.00	pCi/L	16.8	<	70.2	70-130			
Uncertainty: 1.18		MDA: 0.544								
BS (1205664361-BKS)										
Radium-228	2.80	1.00	pCi/L	3.36		83.2	80-120			
Uncertainty: 0.726		MDA: 0.680								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

EPA 905.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573130 - EPA 905.0										
Blank (1205659369-BLK)										
Strontium-90	0.527	2.00	pCi/L				-			U
Uncertainty: 0.935	MDA: 1.63									
Duplicate (1205659370 D)										
Strontium-90	-0.122	2.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.774	MDA: 1.54									
Matrix Spike (1205659371 S)										
Strontium-90	34.3	2.00	pCi/L	29.1	<	118	80-120			
Uncertainty: 3.39	MDA: 2.60									
BS (1205659372-BKS)										
Strontium-90	6.05	2.00	pCi/L	5.58		108	90-110			
Uncertainty: 1.53	MDA: 1.83									

Quality Control Results

(Continued)

EPA 906.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573168 - EPA 906.0										
Blank (1205659461-BLK)										
Tritium	33.7	1000	pCi/L				-			U
Uncertainty: 355	MDA: 620									
Duplicate (1205659462 D)										
Tritium	33.2	1000	pCi/L		<		0-20	0	20	U
Uncertainty: 356	MDA: 623									
Matrix Spike (1205659463 S)										
Tritium	10500	1000	pCi/L	12000	<	87.8	80-120			
Uncertainty: 1310	MDA: 1540									
BS (1205659464-BKS)										
Tritium	4850	1000	pCi/L	4830		100	90-110			
Uncertainty: 623	MDA: 702									

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Aldehydes and Carbonyl Compounds by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1809 - EPA 556										
Blank (W4B1809-BLK1)										
Formaldehyde	ND	0.86	2.0	ug/l						
<i>Surrogate(s)</i>										
2,4,5-TFAP	21.5			ug/l	20.0		108 70-130			
LCS (W4B1809-BS1)										
Formaldehyde	15.0	0.86	2.0	ug/l	20.0		75 70-130			
<i>Surrogate(s)</i>										
2,4,5-TFAP	23.3			ug/l	20.0		117 70-130			
LCS Dup (W4B1809-BSD1)										
Formaldehyde	15.7	0.86	2.0	ug/l	20.0		78 70-130	4	30	
<i>Surrogate(s)</i>										
2,4,5-TFAP	21.6			ug/l	20.0		108 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2										
Blank (W4B2044-BLK1)					Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l						
Aldicarb	ND	0.58	2.0	ug/l						
Aldicarb sulfone	ND	0.73	2.0	ug/l						
Aldicarb sulfoxide	ND	1.0	2.0	ug/l						
Carbaryl	ND	1.0	2.0	ug/l						
Carbofuran	ND	1.0	2.0	ug/l						
Methiocarb	ND	1.0	2.0	ug/l						
Methomyl	ND	1.3	2.0	ug/l						
Oxamyl	ND	1.1	2.0	ug/l						
Propoxur (Baygon)	ND	1.4	2.0	ug/l						
<i>Surrogate(s)</i>										
BDMC	10.6			ug/l	10.0		106 70-130			
LCS (W4B2044-BS1)					Prepared: 02/25/24 Analyzed: 02/26/24					
3-Hydroxycarbofuran	11.0	0.82	2.0	ug/l	10.0		110 70-130			
Aldicarb	10.8	0.58	2.0	ug/l	10.0		108 70-130			
Aldicarb sulfone	8.12	0.73	2.0	ug/l	10.0		81 70-130			
Aldicarb sulfoxide	11.3	1.0	2.0	ug/l	10.0		113 70-130			
Carbaryl	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Carbofuran	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Methiocarb	12.6	1.0	2.0	ug/l	10.0		126 70-130			
Methomyl	9.30	1.3	2.0	ug/l	10.0		93 70-130			
Oxamyl	8.16	1.1	2.0	ug/l	10.0		82 70-130			
Propoxur (Baygon)	11.6	1.4	2.0	ug/l	10.0		116 70-130			
<i>Surrogate(s)</i>										
BDMC	12.6			ug/l	10.0		126 70-130			
Matrix Spike (W4B2044-MS1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.5	0.82	2.0	ug/l	10.0	ND	125 70-130			
Aldicarb	12.9	0.58	2.0	ug/l	10.0	ND	129 70-130			
Aldicarb sulfone	9.57	0.73	2.0	ug/l	10.0	ND	96 70-130			
Aldicarb sulfoxide	12.2	1.0	2.0	ug/l	10.0	ND	122 70-130			
Carbaryl	12.4	1.0	2.0	ug/l	10.0	ND	124 70-130			
Carbofuran	11.0	1.0	2.0	ug/l	10.0	ND	110 70-130			
Methiocarb	13.0	1.0	2.0	ug/l	10.0	ND	130 70-130			
Methomyl	10.8	1.3	2.0	ug/l	10.0	ND	108 70-130			
Oxamyl	10.8	1.1	2.0	ug/l	10.0	ND	108 70-130			
Propoxur (Baygon)	12.1	1.4	2.0	ug/l	10.0	ND	121 70-130			
<i>Surrogate(s)</i>										
BDMC	11.8			ug/l	10.0		118 70-130			
Matrix Spike Dup (W4B2044-MSD1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.1	0.82	2.0	ug/l	10.0	ND	121 70-130	3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Carbamates and Urea Pesticides (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2 (Continued)											
Matrix Spike Dup (W4B2044-MSD1)			Source: 3L04005-04			Prepared & Analyzed: 02/25/24					
Aldicarb	11.8	0.58	2.0	ug/l	10.0	ND	118	70-130	9	30	
Aldicarb sulfone	9.24	0.73	2.0	ug/l	10.0	ND	92	70-130	4	30	
Aldicarb sulfoxide	14.0	1.0	2.0	ug/l	10.0	ND	140	70-130	13	30	MS-01
Carbaryl	11.4	1.0	2.0	ug/l	10.0	ND	114	70-130	8	30	
Carbofuran	11.6	1.0	2.0	ug/l	10.0	ND	116	70-130	5	30	
Methiocarb	12.3	1.0	2.0	ug/l	10.0	ND	123	70-130	5	30	
Methomyl	10.7	1.3	2.0	ug/l	10.0	ND	107	70-130	1	30	
Oxamyl	10.6	1.1	2.0	ug/l	10.0	ND	106	70-130	2	30	
Propoxur (Baygon)	12.2	1.4	2.0	ug/l	10.0	ND	122	70-130	1	30	
<i>Surrogate(s)</i>											
BDMC	12.7			ug/l	10.0		127	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2149 - EPA 515.4											
Blank (W4B2149-BLK1)						Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	ND	0.065	0.20	ug/l							
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l							
2,4-D	ND	0.14	0.40	ug/l							
2,4-DB	0.233	0.19	2.0	ug/l							B-02, J
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l							
Acifluorfen	ND	0.030	0.40	ug/l							
Bentazon	ND	0.23	2.0	ug/l							
Dalapon	ND	0.11	0.40	ug/l							
DCPA	0.0458	0.029	0.10	ug/l							B-02, J
Dicamba	ND	0.15	0.60	ug/l							
Dichloroprop	ND	0.12	0.30	ug/l							
Dinoseb	ND	0.033	0.40	ug/l							
Pentachlorophenol	ND	0.014	0.20	ug/l							
Picloram	ND	0.050	0.60	ug/l							
<i>Surrogate(s)</i>											
2,4-DCAA	9.53			ug/l	10.0		95	70-130			
LCS (W4B2149-BS1)						Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	4.22	0.065	0.20	ug/l	4.00		106	70-130			
2,4,5-TP (Silvex)	4.19	0.026	0.20	ug/l	4.00		105	70-130			
2,4-D	8.44	0.14	0.40	ug/l	8.00		106	70-130			
2,4-DB	15.8	0.19	2.0	ug/l	16.0		99	70-130			
3,5-Dichlorobenzoic acid	8.45	0.12	1.0	ug/l	8.00		106	70-130			
Acifluorfen	4.15	0.030	0.40	ug/l	4.00		104	70-130			
Bentazon	16.2	0.23	2.0	ug/l	16.0		101	70-130			
Dalapon	8.26	0.11	0.40	ug/l	8.00		103	70-130			
DCPA	4.74	0.029	0.10	ug/l	4.00		119	70-130			
Dicamba	8.32	0.15	0.60	ug/l	8.00		104	70-130			
Dichloroprop	8.44	0.12	0.30	ug/l	8.00		105	70-130			
Dinoseb	4.25	0.033	0.40	ug/l	4.00		106	70-130			
Pentachlorophenol	4.24	0.014	0.20	ug/l	4.00		106	70-130			
Picloram	4.17	0.050	0.60	ug/l	4.00		104	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.5			ug/l	10.0		105	70-130			
Matrix Spike (W4B2149-MS1)			Source: 4B15126-01			Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	4.30	0.065	0.20	ug/l	4.00	ND	108	70-130			
2,4,5-TP (Silvex)	4.15	0.026	0.20	ug/l	4.00	ND	104	70-130			
2,4-D	8.41	0.14	0.40	ug/l	8.00	ND	105	70-130			
2,4-DB	16.5	0.19	2.0	ug/l	16.0	ND	103	70-130			
3,5-Dichlorobenzoic acid	8.22	0.12	1.0	ug/l	8.00	ND	103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2149 - EPA 515.4 (Continued)											
Matrix Spike (W4B2149-MS1) Source: 4B15126-01 Prepared: 02/27/24 Analyzed: 03/12/24											
Acifluorfen	4.22	0.030	0.40	ug/l	4.00	ND	105	70-130			
Bentazon	16.9	0.23	2.0	ug/l	16.0	ND	105	70-130			
Dalapon	8.38	0.11	0.40	ug/l	8.00	ND	105	70-130			
DCPA	5.25	0.029	0.10	ug/l	4.00	ND	131	70-130			MS-01
Dicamba	8.25	0.15	0.60	ug/l	8.00	ND	103	70-130			
Dichloroprop	8.27	0.12	0.30	ug/l	8.00	ND	103	70-130			
Dinoseb	4.18	0.033	0.40	ug/l	4.00	ND	105	70-130			
Pentachlorophenol	4.17	0.014	0.20	ug/l	4.00	ND	104	70-130			
Picloram	4.33	0.050	0.60	ug/l	4.00	ND	108	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.3			ug/l	10.0		103	70-130			
Matrix Spike Dup (W4B2149-MSD1) Source: 4B15126-01 Prepared: 02/27/24 Analyzed: 03/12/24											
2,4,5-T	4.24	0.065	0.20	ug/l	4.00	ND	106	70-130	1	30	
2,4,5-TP (Silvex)	4.24	0.026	0.20	ug/l	4.00	ND	106	70-130	2	30	
2,4-D	8.48	0.14	0.40	ug/l	8.00	ND	106	70-130	0.8	30	
2,4-DB	15.8	0.19	2.0	ug/l	16.0	ND	98	70-130	5	30	
3,5-Dichlorobenzoic acid	8.47	0.12	1.0	ug/l	8.00	ND	106	70-130	3	30	
Acifluorfen	4.21	0.030	0.40	ug/l	4.00	ND	105	70-130	0.2	30	
Bentazon	16.6	0.23	2.0	ug/l	16.0	ND	103	70-130	2	30	
Dalapon	8.27	0.11	0.40	ug/l	8.00	ND	103	70-130	1	30	
DCPA	5.35	0.029	0.10	ug/l	4.00	ND	134	70-130	2	30	MS-01
Dicamba	8.44	0.15	0.60	ug/l	8.00	ND	105	70-130	2	30	
Dichloroprop	8.44	0.12	0.30	ug/l	8.00	ND	105	70-130	2	30	
Dinoseb	4.20	0.033	0.40	ug/l	4.00	ND	105	70-130	0.5	30	
Pentachlorophenol	4.26	0.014	0.20	ug/l	4.00	ND	107	70-130	2	30	
Picloram	4.23	0.050	0.60	ug/l	4.00	ND	106	70-130	2	30	
<i>Surrogate(s)</i>											
2,4-DCAA	10.6			ug/l	10.0		106	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1									
Blank (W4B2423-BLK1)					Prepared: 02/29/24 Analyzed: 03/05/24				
4,4'-DDD	ND	0.0030	0.010	ug/l					
4,4'-DDE	ND	0.0040	0.010	ug/l					
4,4'-DDT	ND	0.0030	0.010	ug/l					
Aldrin	ND	0.0040	0.010	ug/l					
alpha-BHC	ND	0.0015	0.010	ug/l					
Aroclor 1016	ND	0.048	0.10	ug/l					
Aroclor 1221	ND	0.044	0.10	ug/l					
Aroclor 1232	ND	0.064	0.10	ug/l					
Aroclor 1242	ND	0.070	0.10	ug/l					
Aroclor 1248	ND	0.049	0.10	ug/l					
Aroclor 1254	ND	0.068	0.10	ug/l					
Aroclor 1260	ND	0.076	0.10	ug/l					
beta-BHC	ND	0.0045	0.010	ug/l					
Chlordane (tech)	ND	0.067	0.10	ug/l					
Chlorothalonil	ND	0.0040	0.050	ug/l					
delta-BHC	ND	0.0030	0.010	ug/l					
Dieldrin	ND	0.0030	0.010	ug/l					
Endosulfan I	ND	0.0030	0.010	ug/l					
Endosulfan II	ND	0.0019	0.010	ug/l					
Endosulfan sulfate	ND	0.0030	0.010	ug/l					
Endrin	ND	0.0030	0.010	ug/l					
Endrin aldehyde	ND	0.0040	0.010	ug/l					
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l					
Heptachlor	ND	0.0031	0.010	ug/l					
Heptachlor epoxide	ND	0.0019	0.010	ug/l					
Hexachlorobenzene	ND	0.0019	0.050	ug/l					
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l					
Methoxychlor	ND	0.0030	0.010	ug/l					
PCBs, Total	ND	0.048	0.50	ug/l					
Propachlor	ND	0.045	0.20	ug/l					
Toxaphene	ND	0.37	1.0	ug/l					
Trifluralin	ND	0.0043	0.010	ug/l					
<i>Surrogate(s)</i>									
4,4-Dibromobiphenyl	0.0981			ug/l	0.100		98 70-130		
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24				
4,4'-DDD	0.0759	0.0030	0.010	ug/l	0.100		76 70-130		
4,4'-DDE	0.0595	0.0040	0.010	ug/l	0.100		60 70-130		Q-02
4,4'-DDT	0.112	0.0030	0.010	ug/l	0.100		112 70-130		
Aldrin	0.0182	0.0040	0.010	ug/l	0.100		18 50-130		Q-02

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1 (Continued)										
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
alpha-BHC	0.0815	0.0015	0.010	ug/l	0.100		82 70-130			
beta-BHC	0.0856	0.0045	0.010	ug/l	0.100		86 70-130			
delta-BHC	0.0950	0.0030	0.010	ug/l	0.100		95 70-130			
Dieldrin	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
Endosulfan I	0.0679	0.0030	0.010	ug/l	0.100		68 70-130			BS-04
Endosulfan II	0.0729	0.0019	0.010	ug/l	0.100		73 70-130			
Endosulfan sulfate	0.0617	0.0030	0.010	ug/l	0.100		62 70-130			BS-04
Endrin	0.0936	0.0030	0.010	ug/l	0.100		94 70-130			
Endrin aldehyde	0.0464	0.0040	0.010	ug/l	0.100		46 70-130			Q-02
gamma-BHC (Lindane)	0.0843	0.0030	0.010	ug/l	0.100		84 70-130			
Heptachlor	0.0785	0.0031	0.010	ug/l	0.100		78 70-130			
Heptachlor epoxide	0.0847	0.0019	0.010	ug/l	0.100		85 70-130			
Methoxychlor	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0697			ug/l	0.100		70 70-130			
LCS (W4B2423-BS2)					Prepared: 02/29/24 Analyzed: 03/05/24					
Aroclor 1016	0.901	0.048	0.10	ug/l	1.00		90 70-130			
Aroclor 1260	0.620	0.076	0.10	ug/l	1.00		62 70-130			Q-02
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0795			ug/l	0.100		79 70-130			
LCS Dup (W4B2423-BSD1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	0.0889	0.0030	0.010	ug/l	0.100		89 70-130	16	30	
4,4'-DDE	0.0670	0.0040	0.010	ug/l	0.100		67 70-130	12	30	Q-02
4,4'-DDT	0.130	0.0030	0.010	ug/l	0.100		130 70-130	14	30	
Aldrin	0.0208	0.0040	0.010	ug/l	0.100		21 50-130	13	30	Q-02
alpha-BHC	0.0961	0.0015	0.010	ug/l	0.100		96 70-130	16	30	
beta-BHC	0.101	0.0045	0.010	ug/l	0.100		101 70-130	17	30	
delta-BHC	0.111	0.0030	0.010	ug/l	0.100		111 70-130	16	30	
Dieldrin	0.0902	0.0030	0.010	ug/l	0.100		90 70-130	17	30	
Endosulfan I	0.0798	0.0030	0.010	ug/l	0.100		80 70-130	16	30	
Endosulfan II	0.0839	0.0019	0.010	ug/l	0.100		84 70-130	14	30	
Endosulfan sulfate	0.0748	0.0030	0.010	ug/l	0.100		75 70-130	19	30	
Endrin	0.107	0.0030	0.010	ug/l	0.100		107 70-130	13	30	
Endrin aldehyde	0.0465	0.0040	0.010	ug/l	0.100		46 70-130	0.3	30	Q-02
gamma-BHC (Lindane)	0.0987	0.0030	0.010	ug/l	0.100		99 70-130	16	30	
Heptachlor	0.0931	0.0031	0.010	ug/l	0.100		93 70-130	17	30	
Heptachlor epoxide	0.0991	0.0019	0.010	ug/l	0.100		99 70-130	16	30	
Methoxychlor	0.0944	0.0030	0.010	ug/l	0.100		94 70-130	21	30	
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0972			ug/l	0.100		97 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B2277 - EPA 335.4											
Blank (W4B2277-BLK1)											
Cyanide, Total	ND	1.5	5.0	ug/l							
LCS (W4B2277-BS1)											
Cyanide, Total	94.9	1.5	5.0	ug/l	100		95	90-110			
Matrix Spike (W4B2277-MS1)											
Cyanide, Total	212	1.5	5.0	ug/l	200	ND	106	90-110			
Matrix Spike Dup (W4B2277-MSD1)											
Cyanide, Total	218	1.5	5.0	ug/l	200	ND	109	90-110	3	20	

Quality Control Results

(Continued)

Diquat and Paraquat by EPA 549.2

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1814 - EPA 549.2											
Blank (W4B1814-BLK1)											
Diquat	ND	1.2	4.0	ug/l							
LCS (W4B1814-BS1)											
Diquat	20.1	1.2	4.0	ug/l	20.0		101	70-130			
Matrix Spike (W4B1814-MS1)											
Diquat	20.6	1.2	4.0	ug/l	20.0	ND	103	46-122			
Matrix Spike Dup (W4B1814-MSD1)											
Diquat	19.8	1.2	4.0	ug/l	20.0	ND	99	46-122	4	30	

Quality Control Results

(Continued)

Endothall By EPA 548.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1800 - EPA 548.1											
Blank (W4B1800-BLK1)											
Endothall	ND	11	45	ug/l							
LCS (W4B1800-BS1)											
Endothall	99.5	11	45	ug/l	100		99	80-120			
Matrix Spike (W4B1800-MS1)											
Endothall	37.1	22	90	ug/l	200	ND	19	0.1-109			J
Matrix Spike Dup (W4B1800-MSD1)											
Endothall	32.4	22	90	ug/l	200	ND	16	0.1-109	14	30	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Explosives by EPA Method 8330

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1813 - EPA 8330A										
Blank (W4B1813-BLK1)					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l						
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l						
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l						
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l						
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l						
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l						
2-Nitrotoluene	ND	0.21	1.0	ug/l						
3-Nitrotoluene	ND	0.37	1.0	ug/l						
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l						
4-Nitrotoluene	ND	0.27	1.0	ug/l						
HMX	ND	0.30	1.0	ug/l						
Nitrobenzene	ND	0.16	1.0	ug/l						
RDX	ND	0.33	1.0	ug/l						
Tetryl	ND	0.45	1.0	ug/l						
LCS (W4B1813-BS1)										
					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	2.83	0.31	1.0	ug/l	2.50	113	70-130			
1,3-Dinitrobenzene	2.69	0.15	1.0	ug/l	2.50	107	70-130			
2,4,6-Trinitrotoluene	2.93	0.34	1.0	ug/l	2.50	117	70-130			
2,4-Dinitrotoluene	2.56	0.34	1.0	ug/l	2.50	102	70-130			
2,6-Dinitrotoluene	2.52	0.20	1.0	ug/l	2.50	101	70-130			
2-Amino-4,6-Dinitrotoluene	2.62	0.35	1.0	ug/l	2.50	105	70-130			
2-Nitrotoluene	2.08	0.21	1.0	ug/l	2.50	83	70-130			
3-Nitrotoluene	2.04	0.37	1.0	ug/l	2.50	82	70-130			
4-Amino-2,6-Dinitrotoluene	2.83	0.17	1.0	ug/l	2.50	113	70-130			
4-Nitrotoluene	2.13	0.27	1.0	ug/l	2.50	85	70-130			
HMX	2.81	0.30	1.0	ug/l	2.50	112	70-130			
Nitrobenzene	2.28	0.16	1.0	ug/l	2.50	91	70-130			
RDX	2.86	0.33	1.0	ug/l	2.50	114	70-130			
Tetryl	2.50	0.45	1.0	ug/l	2.50	100	70-130			
LCS Dup (W4B1813-BSD1)										
					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	2.58	0.31	1.0	ug/l	2.50	103	70-130	9	25	
1,3-Dinitrobenzene	2.44	0.15	1.0	ug/l	2.50	98	70-130	10	25	
2,4,6-Trinitrotoluene	2.65	0.34	1.0	ug/l	2.50	106	70-130	10	25	
2,4-Dinitrotoluene	2.35	0.34	1.0	ug/l	2.50	94	70-130	9	25	
2,6-Dinitrotoluene	2.18	0.20	1.0	ug/l	2.50	87	70-130	14	25	
2-Amino-4,6-Dinitrotoluene	2.36	0.35	1.0	ug/l	2.50	94	70-130	11	25	
2-Nitrotoluene	1.88	0.21	1.0	ug/l	2.50	75	70-130	10	25	
3-Nitrotoluene	2.03	0.37	1.0	ug/l	2.50	81	70-130	0.4	25	
4-Amino-2,6-Dinitrotoluene	2.37	0.17	1.0	ug/l	2.50	95	70-130	18	25	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Explosives by EPA Method 8330 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1813 - EPA 8330A (Continued)											
LCS Dup (W4B1813-BSD1)					Prepared: 02/22/24 Analyzed: 03/13/24						
4-Nitrotoluene	1.80	0.27	1.0	ug/l	2.50		72	70-130	17	25	
HMX	2.48	0.30	1.0	ug/l	2.50		99	70-130	12	25	
Nitrobenzene	1.87	0.16	1.0	ug/l	2.50		75	70-130	19	25	
RDX	2.48	0.33	1.0	ug/l	2.50		99	70-130	14	25	
Tetryl	2.51	0.45	1.0	ug/l	2.50		100	70-130	0.4	25	

Quality Control Results

(Continued)

Glycols by GC/FID

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1920 - EPA 8015B											
Blank (W4B1920-BLK1)					Prepared & Analyzed: 02/22/24						
Ethylene glycol	ND	4.7	10	mg/l							
<i>Surrogate(s)</i>											
1-Propanol	127			mg/l	100		127	50-150			
LCS (W4B1920-BS1)					Prepared & Analyzed: 02/22/24						
Ethylene glycol	91.4	4.7	10	mg/l	100		91	70-130			
<i>Surrogate(s)</i>											
1-Propanol	93.1			mg/l	100		93	50-150			
Matrix Spike (W4B1920-MS1)					Source: 4B20063-06		Prepared & Analyzed: 02/22/24				
Ethylene glycol	94.0	4.7	10	mg/l	100	ND	94	57-127			
<i>Surrogate(s)</i>											
1-Propanol	85.5			mg/l	100		85	50-150			
Matrix Spike Dup (W4B1920-MSD1)					Source: 4B20063-06		Prepared & Analyzed: 02/22/24				
Ethylene glycol	88.8	4.7	10	mg/l	100	ND	89	57-127	6	25	
<i>Surrogate(s)</i>											
1-Propanol	95.6			mg/l	100		96	50-150			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Glyphosate by EPA 547

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2068 - EPA 547											
Blank (W4B2068-BLK1)											
Glyphosate	ND	1.8	5.0	ug/l	Prepared & Analyzed: 02/26/24						
LCS (W4B2068-BS1)											
Glyphosate	24.1	1.8	5.0	ug/l	25.0	96	70-130				
Matrix Spike (W4B2068-MS1)											
Source: 3L04005-04											
Glyphosate	26.5	1.8	5.0	ug/l	25.0	ND	106	41-149			
Matrix Spike (W4B2068-MS2)											
Source: 3L04005-05											
Glyphosate	30.0	1.8	5.0	ug/l	25.0	ND	120	41-149			
Matrix Spike Dup (W4B2068-MSD1)											
Source: 3L04005-04											
Glyphosate	24.9	1.8	5.0	ug/l	25.0	ND	100	41-149	6	30	
Matrix Spike Dup (W4B2068-MSD2)											
Source: 3L04005-05											
Glyphosate	28.5	1.8	5.0	ug/l	25.0	ND	114	41-149	5	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Haloacetic Acids (HAAs) by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1637 - EPA 552.3											
Blank (W4B1637-BLK1)						Prepared: 02/21/24 Analyzed: 03/04/24					
Dibromoacetic acid (dbaa)	ND	0.28	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l							
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l							
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.4			ug/l	10.0		104	70-130			
LCS (W4B1637-BS1)						Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	10.7	0.28	1.0	ug/l	10.0		107	70-130			
Dichloroacetic acid (dcaa)	10.3	0.29	1.0	ug/l	10.0		103	70-130			
Monobromoacetic acid (mbaa)	10.0	0.34	1.0	ug/l	10.0		100	70-130			
Monochloroacetic acid (mcaa)	9.81	0.31	2.0	ug/l	10.0		98	70-130			
Trichloroacetic acid (tcaa)	10.5	0.29	1.0	ug/l	10.0		105	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.0			ug/l	10.0		100	70-130			
Matrix Spike (W4B1637-MS1)						Source: 4B02004-10 Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	11.3	0.28	1.0	ug/l	10.0	0.528	108	70-130			
Dichloroacetic acid (dcaa)	11.1	0.29	1.0	ug/l	10.0	0.607	105	70-130			
Monobromoacetic acid (mbaa)	10.2	0.34	1.0	ug/l	10.0	ND	102	70-130			
Monochloroacetic acid (mcaa)	10.0	0.31	2.0	ug/l	10.0	ND	100	70-130			
Trichloroacetic acid (tcaa)	9.87	0.29	1.0	ug/l	10.0	ND	99	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.1			ug/l	10.0		101	70-130			
Matrix Spike Dup (W4B1637-MSD1)						Source: 4B02004-10 Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	10.8	0.28	1.0	ug/l	10.0	0.528	103	70-130	4	30	
Dichloroacetic acid (dcaa)	10.6	0.29	1.0	ug/l	10.0	0.607	100	70-130	4	30	
Monobromoacetic acid (mbaa)	9.55	0.34	1.0	ug/l	10.0	ND	96	70-130	6	30	
Monochloroacetic acid (mcaa)	10.4	0.31	2.0	ug/l	10.0	ND	104	70-130	3	30	
Trichloroacetic acid (tcaa)	9.70	0.29	1.0	ug/l	10.0	ND	97	70-130	2	30	
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.5			ug/l	10.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4C0568 - EPA 245.1											
Blank (W4C0568-BLK1)											
Mercury, Total	ND	0.037	0.050	ug/l							
LCS (W4C0568-BS1)											
Mercury, Total	1.09	0.037	0.050	ug/l	1.00		109	85-115			
Matrix Spike (W4C0568-MS1)											
Mercury, Total	1.09	0.037	0.050	ug/l	1.00	ND	109	70-130			
Matrix Spike (W4C0568-MS2)											
Mercury, Total	1.05	0.037	0.050	ug/l	1.00	ND	105	70-130			
Matrix Spike Dup (W4C0568-MSD1)											
Mercury, Total	1.08	0.037	0.050	ug/l	1.00	ND	108	70-130	0.7	20	
Matrix Spike Dup (W4C0568-MSD2)											
Mercury, Total	1.06	0.037	0.050	ug/l	1.00	ND	106	70-130	2	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Nitrosamines by CI GC/MS/MS, EPA 521

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2291 - EPA 521										
Blank (W4B2291-BLK1)					Prepared: 02/28/24 Analyzed: 02/29/24					
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l						
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l						
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l						
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l						
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l						
N-Nitrosomorpholine	ND	0.68	2.0	ng/l						
N-Nitrosopiperidine	ND	0.65	2.0	ng/l						
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l						
<i>Surrogate(s)</i>										
NDMA-d6	27.6			ng/l	25.0		110 70-130			
LCS (W4B2291-BS1)					Prepared: 02/28/24 Analyzed: 02/29/24					
N-Nitrosodiethylamine	1.75	0.66	2.0	ng/l	2.00		87 50-150			J
N-Nitrosodimethylamine	2.80	1.3	2.0	ng/l	2.00		140 50-150			
N-Nitrosodi-n-butylamine	1.40	0.53	2.0	ng/l	2.00		70 50-150			J
N-Nitrosodi-n-propylamine	1.44	0.62	2.0	ng/l	2.00		72 50-150			J
N-Nitrosomethylethylamine	1.89	0.54	2.0	ng/l	2.00		95 50-150			J
N-Nitrosomorpholine	1.96	0.68	2.0	ng/l	2.00		98 50-150			J
N-Nitrosopiperidine	1.79	0.65	2.0	ng/l	2.00		90 50-150			J
N-Nitrosopyrrolidine	1.81	0.62	2.0	ng/l	2.00		91 50-150			J
<i>Surrogate(s)</i>										
NDMA-d6	30.2			ng/l	25.0		121 70-130			
LCS Dup (W4B2291-BSD1)					Prepared: 02/28/24 Analyzed: 02/29/24					
N-Nitrosodiethylamine	1.87	0.66	2.0	ng/l	2.00		93 50-150	6	50	J
N-Nitrosodimethylamine	2.65	1.3	2.0	ng/l	2.00		133 50-150	5	50	
N-Nitrosodi-n-butylamine	1.41	0.53	2.0	ng/l	2.00		70 50-150	0.9	50	J
N-Nitrosodi-n-propylamine	1.44	0.62	2.0	ng/l	2.00		72 50-150	0.07	50	J
N-Nitrosomethylethylamine	1.75	0.54	2.0	ng/l	2.00		88 50-150	8	50	J
N-Nitrosomorpholine	2.05	0.68	2.0	ng/l	2.00		102 50-150	5	50	
N-Nitrosopiperidine	1.75	0.65	2.0	ng/l	2.00		87 50-150	3	50	J
N-Nitrosopyrrolidine	1.80	0.62	2.0	ng/l	2.00		90 50-150	0.6	50	J
<i>Surrogate(s)</i>										
NDMA-d6	27.4			ng/l	25.0		109 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533											
Blank (W4C0509-BLK1)						Prepared: 03/07/24 Analyzed: 03/10/24					
11CI-PF3OUdS	ND	0.89	2.0	ng/l							
4:2 FTS	ND	0.83	2.0	ng/l							
6:2 FTS	ND	0.78	2.0	ng/l							
8:2 FTS	ND	0.68	2.0	ng/l							
9CI-PF3ONS	ND	0.84	2.0	ng/l							
ADONA	ND	0.71	2.0	ng/l							
HFPO-DA	ND	0.92	2.0	ng/l							
NFDHA	ND	0.75	2.0	ng/l							
PFBA	ND	0.61	2.0	ng/l							
PFBS	ND	0.46	2.0	ng/l							
PFDA	ND	0.64	2.0	ng/l							
PFDoA	ND	0.65	2.0	ng/l							
PFEESA	ND	0.45	2.0	ng/l							
PFHpA	ND	0.65	2.0	ng/l							
PFHpS	ND	0.60	2.0	ng/l							
PFHxA	ND	0.72	2.0	ng/l							
PFHxS	ND	0.99	2.0	ng/l							
PFMBA	ND	0.62	2.0	ng/l							
PFMPA	ND	0.42	2.0	ng/l							
PFNA	ND	0.88	2.0	ng/l							
PFOA	ND	0.92	2.0	ng/l							
PFOS	ND	0.68	2.0	ng/l							
PFPeA	ND	0.45	2.0	ng/l							
PFPeS	ND	0.50	2.0	ng/l							
PFUnA	ND	0.59	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-4:2 FTS	42.8			ng/l	40.0		107	50-200			
13C2-6:2 FTS	44.3			ng/l	40.0		111	50-200			
13C2-8:2 FTS	41.5			ng/l	40.0		104	50-200			
13C2-PFDoA	10.2			ng/l	10.0		102	50-200			
13C3-PFBS	11.2			ng/l	10.0		112	50-200			
13C3-PFHxS	11.3			ng/l	10.0		113	50-200			
13C4-PFBA	10.7			ng/l	10.0		107	50-200			
13C4-PFHpA	10.4			ng/l	10.0		104	50-200			
13C5-PFHxA	10.8			ng/l	10.0		108	50-200			
13C5-PFPeA	10.8			ng/l	10.0		108	50-200			
13C6-PFDA	10.7			ng/l	10.0		107	50-200			
13C7-PFUnA	10.3			ng/l	10.0		103	50-200			
13C8-PFOA	10.2			ng/l	10.0		102	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)											
Blank (W4C0509-BLK1)						Prepared: 03/07/24 Analyzed: 03/10/24					
<i>Surrogate(s)</i>											
13C8-PFOS	10.8			ng/l	10.0		108	50-200			
13C9-PFNA	10.3			ng/l	10.0		103	50-200			
HFPO-DA-13C3	9.79			ng/l	10.0		98	50-200			
LCS (W4C0509-BS1)						Prepared: 03/07/24 Analyzed: 03/10/24					
11CI-PF3OUdS	2.33	0.89	2.0	ng/l	2.00		116	50-150			
4:2 FTS	2.54	0.83	2.0	ng/l	2.00		127	50-150			
6:2 FTS	2.64	0.78	2.0	ng/l	2.00		132	50-150			
8:2 FTS	2.56	0.68	2.0	ng/l	2.00		128	50-150			
9CI-PF3ONS	2.22	0.84	2.0	ng/l	2.00		111	50-150			
ADONA	2.36	0.71	2.0	ng/l	2.00		118	50-150			
HFPO-DA	2.43	0.92	2.0	ng/l	2.00		121	50-150			
NFDHA	2.41	0.75	2.0	ng/l	2.00		120	50-150			
PFBA	2.46	0.61	2.0	ng/l	2.00		123	50-150			
PFBS	2.46	0.46	2.0	ng/l	2.00		123	50-150			
PFDA	2.26	0.64	2.0	ng/l	2.00		113	50-150			
PFDoA	2.41	0.65	2.0	ng/l	2.00		121	50-150			
PFEESA	2.22	0.45	2.0	ng/l	2.00		111	50-150			
PFHpA	2.23	0.65	2.0	ng/l	2.00		111	50-150			
PFHpS	2.35	0.60	2.0	ng/l	2.00		118	50-150			
PFHxA	2.41	0.72	2.0	ng/l	2.00		121	50-150			
PFHxS	2.51	0.99	2.0	ng/l	2.00		126	50-150			
PFMBA	2.34	0.62	2.0	ng/l	2.00		117	50-150			
PFMPA	2.34	0.42	2.0	ng/l	2.00		117	50-150			
PFNA	2.05	0.88	2.0	ng/l	2.00		103	50-150			
PFOA	2.41	0.92	2.0	ng/l	2.00		121	50-150			
PFOS	2.17	0.68	2.0	ng/l	2.00		109	50-150			
PFPeA	2.24	0.45	2.0	ng/l	2.00		112	50-150			
PFPeS	2.47	0.50	2.0	ng/l	2.00		123	50-150			
PFUnA	2.34	0.59	2.0	ng/l	2.00		117	50-150			
<i>Surrogate(s)</i>											
13C2-4:2 FTS	40.5			ng/l	40.0		101	50-200			
13C2-6:2 FTS	40.8			ng/l	40.0		102	50-200			
13C2-8:2 FTS	41.6			ng/l	40.0		104	50-200			
13C2-PFDoA	10.2			ng/l	10.0		102	50-200			
13C3-PFBS	11.0			ng/l	10.0		110	50-200			
13C3-PFHxS	10.8			ng/l	10.0		108	50-200			
13C4-PFBA	11.3			ng/l	10.0		113	50-200			
13C4-PFHpA	10.5			ng/l	10.0		105	50-200			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)											
LCS (W4C0509-BS1)						Prepared: 03/07/24 Analyzed: 03/10/24					
<i>Surrogate(s)</i>											
13C5-PFHxA	10.4			ng/l	10.0		104	50-200			
13C5-PFPeA	11.4			ng/l	10.0		114	50-200			
13C6-PFDA	10.8			ng/l	10.0		108	50-200			
13C7-PFUnA	10.6			ng/l	10.0		106	50-200			
13C8-PFOA	10.3			ng/l	10.0		103	50-200			
13C8-PFOS	10.9			ng/l	10.0		109	50-200			
13C9-PFNA	11.0			ng/l	10.0		110	50-200			
HFPO-DA-13C3	10.5			ng/l	10.0		105	50-200			
LCS Dup (W4C0509-BSD1)						Prepared: 03/07/24 Analyzed: 03/10/24					
11CI-PF3OUdS	2.25	0.89	2.0	ng/l	2.00		113	50-150	3	30	
4:2 FTS	2.14	0.83	2.0	ng/l	2.00		107	50-150	17	30	
6:2 FTS	2.61	0.78	2.0	ng/l	2.00		130	50-150	1	30	
8:2 FTS	2.91	0.68	2.0	ng/l	2.00		146	50-150	13	30	
9CI-PF3ONS	2.11	0.84	2.0	ng/l	2.00		105	50-150	5	30	
ADONA	2.23	0.71	2.0	ng/l	2.00		111	50-150	6	30	
HFPO-DA	2.01	0.92	2.0	ng/l	2.00		100	50-150	19	30	
NFDHA	2.09	0.75	2.0	ng/l	2.00		105	50-150	14	30	
PFBA	2.40	0.61	2.0	ng/l	2.00		120	50-150	2	30	
PFBS	2.20	0.46	2.0	ng/l	2.00		110	50-150	11	30	
PFDA	2.23	0.64	2.0	ng/l	2.00		111	50-150	2	30	
PFDoA	2.22	0.65	2.0	ng/l	2.00		111	50-150	8	30	
PFEESA	2.26	0.45	2.0	ng/l	2.00		113	50-150	2	30	
PFHpA	2.21	0.65	2.0	ng/l	2.00		111	50-150	0.9	30	
PFHpS	2.26	0.60	2.0	ng/l	2.00		113	50-150	4	30	
PFHxA	2.08	0.72	2.0	ng/l	2.00		104	50-150	15	30	
PFHxS	2.15	0.99	2.0	ng/l	2.00		107	50-150	16	30	
PFMBA	2.31	0.62	2.0	ng/l	2.00		116	50-150	1	30	
PFMPA	2.22	0.42	2.0	ng/l	2.00		111	50-150	5	30	
PFNA	2.46	0.88	2.0	ng/l	2.00		123	50-150	18	30	
PFOA	2.39	0.92	2.0	ng/l	2.00		120	50-150	0.9	30	
PFOS	2.43	0.68	2.0	ng/l	2.00		122	50-150	11	30	
PFPeA	2.24	0.45	2.0	ng/l	2.00		112	50-150	0.2	30	
PFPeS	2.12	0.50	2.0	ng/l	2.00		106	50-150	15	30	
PFUnA	2.31	0.59	2.0	ng/l	2.00		115	50-150	1	30	
<i>Surrogate(s)</i>											
13C2-4:2 FTS	40.0			ng/l	40.0		100	50-200			
13C2-6:2 FTS	40.4			ng/l	40.0		101	50-200			
13C2-8:2 FTS	39.6			ng/l	40.0		99	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)											
LCS Dup (W4C0509-BSD1)						Prepared: 03/07/24 Analyzed: 03/10/24					
<i>Surrogate(s)</i>											
13C2-PFDoA	10.4			ng/l	10.0		104	50-200			
13C3-PFBS	10.2			ng/l	10.0		102	50-200			
13C3-PFHxS	10.7			ng/l	10.0		107	50-200			
13C4-PFBA	11.1			ng/l	10.0		111	50-200			
13C4-PFHpA	10.4			ng/l	10.0		104	50-200			
13C5-PFHxA	10.6			ng/l	10.0		106	50-200			
13C5-PFPeA	10.7			ng/l	10.0		107	50-200			
13C6-PFDA	10.5			ng/l	10.0		105	50-200			
13C7-PFUnA	10.1			ng/l	10.0		101	50-200			
13C8-PFOA	10.2			ng/l	10.0		102	50-200			
13C8-PFOS	11.1			ng/l	10.0		111	50-200			
13C9-PFNA	10.6			ng/l	10.0		106	50-200			
HFPO-DA-13C3	10.7			ng/l	10.0		107	50-200			

Quality Control Results

(Continued)

Perchlorate by EPA 314.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1668 - EPA 314.0											
Blank (W4B1668-BLK1)						Prepared & Analyzed: 02/21/24					
Perchlorate	ND	0.26	1.0	ug/l							
LCS (W4B1668-BS1)						Prepared & Analyzed: 02/21/24					
Perchlorate	9.56	0.26	1.0	ug/l	10.0		96	85-115			
Matrix Spike (W4B1668-MS1)						Prepared & Analyzed: 02/21/24					
Perchlorate	14.3	0.26	1.0	ug/l	10.0	5.39	90	80-120			
Matrix Spike Dup (W4B1668-MSD1)						Prepared & Analyzed: 02/21/24					
Perchlorate	14.6	0.26	1.0	ug/l	10.0	5.39	92	80-120	2	15	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Radiological Parameters by APHA/EPA Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4C0565 - EPA 900.0									
Blank (W4C0565-BLK1)					Prepared: 03/07/24 Analyzed: 03/15/24				
Gross Alpha	-0.0900			pCi/L					
Counting Uncertainty: 0.355	MDA: 0.616								
Gross Beta	-0.752			pCi/L					
Counting Uncertainty: 0.596	MDA: 0.983								
LCS (W4C0565-BS1)					Prepared: 03/07/24 Analyzed: 03/15/24				
Gross Alpha	9.20			pCi/L	12.0		77 60-110		
Counting Uncertainty: 0.676	MDA: 0.684								
Gross Beta	13.0			pCi/L	16.0		81 72-123		
Counting Uncertainty: 0.736	MDA: 0.78								
Matrix Spike (W4C0565-MS1) Source: 3L04005-04					Prepared: 03/07/24 Analyzed: 03/16/24				
Gross Alpha	7.90			pCi/L	12.0	0.152	65 28-124		
Counting Uncertainty: 0.872	MDA: 1.069								
Gross Beta	12.1			pCi/L	16.0	0.850	70 61-125		
Counting Uncertainty: 0.896	MDA: 1.178								
Matrix Spike (W4C0565-MS2) Source: 4B09021-01					Prepared: 03/07/24 Analyzed: 03/16/24				
Gross Alpha	72.0			pCi/L	240	-4.21	30 28-124		
Counting Uncertainty: 13.618	MDA: 18.835								
Gross Beta	301			pCi/L	320	65.2	74 61-125		
Counting Uncertainty: 15.954	MDA: 17.962								
Matrix Spike Dup (W4C0565-MSD1) Source: 3L04005-04					Prepared: 03/07/24 Analyzed: 03/16/24				
Gross Alpha	6.30			pCi/L	12.0	0.152	51 28-124	23	30
Counting Uncertainty: 0.807	MDA: 1.018								
Gross Beta	12.3			pCi/L	16.0	0.850	72 61-125	2	30
Counting Uncertainty: 0.751	MDA: 0.857								
Matrix Spike Dup (W4C0565-MSD2) Source: 4B09021-01					Prepared: 03/07/24 Analyzed: 03/16/24				
Gross Alpha	72.1			pCi/L	240	-4.21	30 28-124	0.2	30
Counting Uncertainty: 12.807	MDA: 17.114								
Gross Beta	278			pCi/L	320	65.2	66 61-125	8	30
Counting Uncertainty: 17.091	MDA: 21.238								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatiles Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2											
Blank (W4B2424-BLK1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	ND	0.063	0.10	ug/l							
Atrazine	ND	0.042	0.10	ug/l							
Benzo (a) pyrene	ND	0.045	0.10	ug/l							
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							
Bromacil	ND	0.24	0.50	ug/l							
Butachlor	ND	0.040	0.10	ug/l							
Captan	ND	0.32	1.0	ug/l							
Chlorpropham	ND	0.040	0.10	ug/l							
Diazinon	ND	0.022	0.10	ug/l							
Dimethoate	ND	0.041	0.20	ug/l							
Diphenamid	ND	0.030	0.10	ug/l							
Disulfoton	ND	0.11	0.20	ug/l							
EPTC	ND	0.020	0.10	ug/l							
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							
Metolachlor	ND	0.030	0.10	ug/l							
Metribuzin	ND	0.030	0.10	ug/l							
Molinate	ND	0.030	0.10	ug/l							
Prometryn	ND	0.030	0.10	ug/l							
Simazine	ND	0.058	0.10	ug/l							
Terbacil	ND	0.090	2.0	ug/l							
Thiobencarb	ND	0.069	0.10	ug/l							
Trithion	ND	0.054	0.10	ug/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00		99	70-130			
Perylene-d12	3.66			ug/l	5.00		73	50-120			
Triphenyl phosphate	4.65			ug/l	5.00		93	70-130			
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	ND	0.063	0.10	ug/l							QC-2
Atrazine	ND	0.042	0.10	ug/l							QC-2
Benzo (a) pyrene	ND	0.045	0.10	ug/l							QC-2
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							QC-2
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							QC-2
Bromacil	ND	0.24	0.50	ug/l							QC-2
Butachlor	ND	0.040	0.10	ug/l							QC-2
Captan	ND	0.32	1.0	ug/l							QC-2
Chlorpropham	ND	0.040	0.10	ug/l							QC-2
Diazinon	ND	0.022	0.10	ug/l							QC-2
Dimethoate	ND	0.041	0.20	ug/l							QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatle Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Diphenamid	ND	0.030	0.10	ug/l							QC-2
Disulfoton	ND	0.11	0.20	ug/l							QC-2
EPTC	ND	0.020	0.10	ug/l							QC-2
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							QC-2
Metolachlor	ND	0.030	0.10	ug/l							QC-2
Metribuzin	ND	0.030	0.10	ug/l							QC-2
Molinate	ND	0.030	0.10	ug/l							QC-2
Prometryn	ND	0.030	0.10	ug/l							QC-2
Simazine	ND	0.058	0.10	ug/l							QC-2
Terbacil	ND	0.090	2.0	ug/l							QC-2
Thiobencarb	ND	0.069	0.10	ug/l							QC-2
Trithion	ND	0.054	0.10	ug/l							QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.84			ug/l	5.00		97	70-130			QC-2
Perylene-d12	4.14			ug/l	5.00		83	50-120			QC-2
Triphenyl phosphate	4.92			ug/l	5.00		98	70-130			QC-2
LCS (W4B2424-BS1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	9.57	0.063	0.10	ug/l	7.50		128	70-130			
Atrazine	4.30	0.042	0.10	ug/l	5.00		86	70-130			
Benzo (a) pyrene	4.04	0.045	0.10	ug/l	5.00		81	60-130			
Bis(2-ethylhexyl)adipate	8.19	0.38	5.0	ug/l	5.00		164	70-130			Q-08
Bis(2-ethylhexyl)phthalate	5.93	0.41	3.0	ug/l	5.00		119	70-130			
Bromacil	6.45	0.24	0.50	ug/l	5.00		129	70-130			
Butachlor	5.81	0.040	0.10	ug/l	5.00		116	70-130			
Captan	5.59	0.32	1.0	ug/l	5.00		112	70-130			
Chlorpropham	5.18	0.040	0.10	ug/l	5.00		104	70-130			
Diazinon	3.38	0.022	0.10	ug/l	5.00		68	50-120			
Dimethoate	3.81	0.041	0.20	ug/l	5.00		76	50-120			
Diphenamid	5.69	0.030	0.10	ug/l	5.00		114	70-130			
Disulfoton	3.98	0.11	0.20	ug/l	5.00		80	50-120			
EPTC	4.45	0.020	0.10	ug/l	5.00		89	70-130			
Hexachlorocyclopentadiene	2.20	0.092	1.0	ug/l	2.50		88	33-106			
Metolachlor	6.29	0.030	0.10	ug/l	5.00		126	60-130			
Metribuzin	5.45	0.030	0.10	ug/l	5.00		109	50-120			
Molinate	3.79	0.030	0.10	ug/l	5.00		76	70-130			
Prometryn	3.05	0.030	0.10	ug/l	5.00		61	30-120			
Simazine	4.66	0.058	0.10	ug/l	5.00		93	60-130			
Terbacil	5.12	0.090	2.0	ug/l	5.00		102	70-130			
Thiobencarb	6.72	0.069	0.10	ug/l	5.00		134	70-130			Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatle Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS (W4B2424-BS1)										
					Prepared: 02/29/24		Analyzed: 03/09/24			
Trithion	6.14	0.054	0.10	ug/l	5.00	123	70-130			
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	2.62			ug/l	5.00	52	70-130			S-11
Perylene-d12	4.14			ug/l	5.00	83	50-120			
Triphenyl phosphate	4.38			ug/l	5.00	88	70-130			
LCS (W4B2424-BS2)										
					Prepared: 02/29/24		Analyzed: 03/23/24			
Alachlor	7.14	0.063	0.10	ug/l	7.50	95	70-130			QC-2
Atrazine	4.76	0.042	0.10	ug/l	5.00	95	70-130			QC-2
Benzo (a) pyrene	4.07	0.045	0.10	ug/l	5.00	81	60-130			QC-2
Bis(2-ethylhexyl)adipate	5.27	0.38	5.0	ug/l	5.00	105	70-130			QC-2
Bis(2-ethylhexyl)phthalate	4.97	0.41	3.0	ug/l	5.00	99	70-130			QC-2
Bromacil	4.80	0.24	0.50	ug/l	5.00	96	70-130			QC-2
Butachlor	4.38	0.040	0.10	ug/l	5.00	88	70-130			QC-2
Captan	4.76	0.32	1.0	ug/l	5.00	95	70-130			QC-2
Chlorpropham	4.70	0.040	0.10	ug/l	5.00	94	70-130			QC-2
Diazinon	3.01	0.022	0.10	ug/l	5.00	60	50-120			QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00	76	50-120			QC-2
Diphenamid	4.98	0.030	0.10	ug/l	5.00	100	70-130			QC-2
Disulfoton	4.23	0.11	0.20	ug/l	5.00	85	50-120			QC-2
EPTC	5.02	0.020	0.10	ug/l	5.00	100	70-130			QC-2
Hexachlorocyclopentadiene	2.06	0.092	1.0	ug/l	2.50	82	33-106			QC-2
Metolachlor	4.64	0.030	0.10	ug/l	5.00	93	60-130			QC-2
Metribuzin	4.44	0.030	0.10	ug/l	5.00	89	50-120			QC-2
Molinate	4.95	0.030	0.10	ug/l	5.00	99	70-130			QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00	60	30-120			QC-2
Simazine	4.53	0.058	0.10	ug/l	5.00	91	60-130			QC-2
Terbacil	5.50	0.090	2.0	ug/l	5.00	110	70-130			QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00	99	70-130			QC-2
Trithion	4.63	0.054	0.10	ug/l	5.00	93	70-130			QC-2
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	4.96			ug/l	5.00	99	70-130			QC-2
Perylene-d12	4.41			ug/l	5.00	88	50-120			QC-2
Triphenyl phosphate	4.83			ug/l	5.00	97	70-130			QC-2
LCS Dup (W4B2424-BSD1)										
					Prepared: 02/29/24		Analyzed: 03/09/24			
Alachlor	10.3	0.063	0.10	ug/l	7.50	137	70-130	7	30	Q-08
Atrazine	4.62	0.042	0.10	ug/l	5.00	92	70-130	7	30	
Benzo (a) pyrene	4.17	0.045	0.10	ug/l	5.00	83	60-130	3	30	
Bis(2-ethylhexyl)adipate	7.82	0.38	5.0	ug/l	5.00	156	70-130	5	30	Q-08
Bis(2-ethylhexyl)phthalate	6.69	0.41	3.0	ug/l	5.00	134	70-130	12	30	Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS Dup (W4B2424-BSD1)					Prepared: 02/29/24 Analyzed: 03/09/24					
Bromacil	6.32	0.24	0.50	ug/l	5.00	126	70-130	2	30	
Butachlor	5.69	0.040	0.10	ug/l	5.00	114	70-130	2	30	
Captan	6.03	0.32	1.0	ug/l	5.00	121	70-130	8	30	
Chlorpropham	5.50	0.040	0.10	ug/l	5.00	110	70-130	6	30	
Diazinon	3.48	0.022	0.10	ug/l	5.00	70	50-120	3	30	
Dimethoate	4.25	0.041	0.20	ug/l	5.00	85	50-120	11	30	
Diphenamid	5.82	0.030	0.10	ug/l	5.00	116	70-130	2	30	
Disulfoton	4.30	0.11	0.20	ug/l	5.00	86	50-120	8	30	
EPTC	4.82	0.020	0.10	ug/l	5.00	96	70-130	8	30	
Hexachlorocyclopentadiene	2.39	0.092	1.0	ug/l	2.50	96	33-106	8	30	
Metolachlor	6.82	0.030	0.10	ug/l	5.00	136	60-130	8	30	Q-08
Metribuzin	5.82	0.030	0.10	ug/l	5.00	116	50-120	7	30	
Molinate	4.08	0.030	0.10	ug/l	5.00	82	70-130	7	30	
Prometryn	2.94	0.030	0.10	ug/l	5.00	59	30-120	4	30	
Simazine	4.92	0.058	0.10	ug/l	5.00	98	60-130	5	30	
Terbacil	5.48	0.090	2.0	ug/l	5.00	110	70-130	7	30	
Thiobencarb	6.91	0.069	0.10	ug/l	5.00	138	70-130	3	30	Q-08
Trithion	6.93	0.054	0.10	ug/l	5.00	139	70-130	12	30	Q-08
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	5.26			ug/l	5.00	105	70-130			
Perylene-d12	3.95			ug/l	5.00	79	50-120			
Triphenyl phosphate	4.36			ug/l	5.00	87	70-130			
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	7.05	0.063	0.10	ug/l	7.50	94	70-130	1	30	QC-2
Atrazine	4.88	0.042	0.10	ug/l	5.00	98	70-130	2	30	QC-2
Benzo (a) pyrene	4.12	0.045	0.10	ug/l	5.00	82	60-130	1	30	QC-2
Bis(2-ethylhexyl)adipate	5.68	0.38	5.0	ug/l	5.00	114	70-130	7	30	QC-2
Bis(2-ethylhexyl)phthalate	5.39	0.41	3.0	ug/l	5.00	108	70-130	8	30	QC-2
Bromacil	4.68	0.24	0.50	ug/l	5.00	94	70-130	2	30	QC-2
Butachlor	4.62	0.040	0.10	ug/l	5.00	92	70-130	6	30	QC-2
Captan	4.96	0.32	1.0	ug/l	5.00	99	70-130	4	30	QC-2
Chlorpropham	5.17	0.040	0.10	ug/l	5.00	103	70-130	10	30	QC-2
Diazinon	2.81	0.022	0.10	ug/l	5.00	56	50-120	7	30	QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00	76	50-120	0.2	30	QC-2
Diphenamid	5.12	0.030	0.10	ug/l	5.00	102	70-130	3	30	QC-2
Disulfoton	4.28	0.11	0.20	ug/l	5.00	86	50-120	1	30	QC-2
EPTC	5.25	0.020	0.10	ug/l	5.00	105	70-130	5	30	QC-2
Hexachlorocyclopentadiene	2.16	0.092	1.0	ug/l	2.50	87	33-106	5	30	QC-2
Metolachlor	4.55	0.030	0.10	ug/l	5.00	91	60-130	2	30	QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24						
Metribuzin	4.48	0.030	0.10	ug/l	5.00		90	50-120	1	30	QC-2
Molinate	5.69	0.030	0.10	ug/l	5.00		114	70-130	14	30	QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00		60	30-120	0.1	30	QC-2
Simazine	4.22	0.058	0.10	ug/l	5.00		84	60-130	7	30	QC-2
Terbacil	5.64	0.090	2.0	ug/l	5.00		113	70-130	3	30	QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00		99	70-130	0.03	30	QC-2
Trithion	4.58	0.054	0.10	ug/l	5.00		92	70-130	1	30	QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00		99	70-130			QC-2
Perylene-d12	4.23			ug/l	5.00		85	50-120			QC-2
Triphenyl phosphate	4.92			ug/l	5.00		98	70-130			QC-2

Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C1219 - EPA 1613B											
Blank (W4C1219-BLK1)					Prepared: 03/15/24 Analyzed: 03/21/24						
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l							
LCS (W4C1219-BS1)					Prepared: 03/15/24 Analyzed: 03/21/24						
2,3,7,8-TCDD (Dioxin)	8.66	2.48	5.00	pg/l	10.0		87	73-146			
LCS Dup (W4C1219-BSD1)					Prepared: 03/15/24 Analyzed: 03/21/24						
2,3,7,8-TCDD (Dioxin)	10.5	2.48	5.00	pg/l	10.0		105	73-146	19	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1715 - EPA 524.2											
Blank (W4B1715-BLK1)						Prepared & Analyzed: 02/21/24					
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							
1,1-Dichloroethane	ND	0.27	0.50	ug/l							
1,1-Dichloroethene	ND	0.16	0.50	ug/l							
1,1-Dichloropropene	ND	0.14	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l							
1,2-Dichloroethane	ND	0.24	0.50	ug/l							
1,2-Dichloropropane	ND	0.13	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l							
1,3-Dichloropropane	ND	0.27	0.50	ug/l							
1,3-Dichloropropene, Total	ND		0.50	ug/l							
2,2-Dichloropropane	ND	0.17	0.50	ug/l							
2-Butanone	ND	1.5	5.0	ug/l							
2-Chlorotoluene	ND	0.15	0.50	ug/l							
2-Hexanone	ND	1.2	5.0	ug/l							
4-Chlorotoluene	ND	0.15	0.50	ug/l							
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l							
Acetone	ND	3.1	5.0	ug/l							
Benzene	ND	0.15	0.50	ug/l							
Bromobenzene	ND	0.15	0.50	ug/l							
Bromochloromethane	ND	0.15	0.50	ug/l							
Bromodichloromethane	ND	0.24	0.50	ug/l							
Bromoform	ND	0.38	0.50	ug/l							
Bromomethane	ND	0.27	0.50	ug/l							
Carbon Disulfide	ND	0.25	0.50	ug/l							
Carbon tetrachloride	ND	0.27	0.50	ug/l							
Chlorobenzene	ND	0.15	0.50	ug/l							
Chloroethane	ND	0.17	0.50	ug/l							
Chloroform	ND	0.27	0.50	ug/l							
Chloromethane	ND	0.23	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l							
Dibromochloromethane	ND	0.20	0.50	ug/l							
Dibromomethane	ND	0.20	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l							

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B1715 - EPA 524.2 (Continued)											
Blank (W4B1715-BLK1)					Prepared & Analyzed: 02/21/24						
Di-isopropyl ether	ND	1.1	2.0	ug/l							
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l							
Ethylbenzene	ND	0.21	0.50	ug/l							
Freon 113	ND	1.5	5.0	ug/l							
Hexachlorobutadiene	ND	0.40	0.50	ug/l							
Isopropylbenzene	ND	0.18	0.50	ug/l							
m,p-Xylene	ND	0.33	0.50	ug/l							
m-Dichlorobenzene	ND	0.14	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l							
Methylene chloride	ND	0.30	0.50	ug/l							
Naphthalene	ND	0.35	0.50	ug/l							
n-Butylbenzene	ND	0.29	0.50	ug/l							
n-Propylbenzene	ND	0.18	0.50	ug/l							
o-Dichlorobenzene	ND	0.19	0.50	ug/l							
o-Xylene	ND	0.20	0.50	ug/l							
p-Dichlorobenzene	ND	0.18	0.50	ug/l							
p-Isopropyltoluene	ND	0.25	0.50	ug/l							
sec-Butylbenzene	ND	0.24	0.50	ug/l							
Styrene	ND	0.19	0.50	ug/l							
Tert-amyl methyl ether	ND	0.59	2.0	ug/l							
Tert-butyl alcohol	ND	0.45	2.0	ug/l							
tert-Butylbenzene	ND	0.18	0.50	ug/l							
Tetrachloroethene	ND	0.18	0.50	ug/l							
THMs, Total	ND		0.50	ug/l							
Toluene	ND	0.29	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l							
Trichloroethene	ND	0.18	0.50	ug/l							
Trichlorofluoromethane	ND	0.18	0.50	ug/l							
Vinyl chloride	ND	0.18	0.50	ug/l							
Xylenes, Total	ND		0.50	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	45.1			ug/l	50.0		90	70-130			
4-Bromofluorobenzene	46.4			ug/l	50.0		93	70-130			
LCS (W4B1715-BS1)					Prepared & Analyzed: 02/21/24						
1,1,1,2-Tetrachloroethane	4.92	0.24	0.50	ug/l	5.00		98	70-130			
1,1,1-Trichloroethane	4.75	0.26	0.50	ug/l	5.00		95	70-130			
1,1,2,2-Tetrachloroethane	4.83	0.20	0.50	ug/l	5.00		97	70-130			
1,1,2-Trichloroethane	4.61	0.19	0.50	ug/l	5.00		92	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1715 - EPA 524.2 (Continued)										
LCS (W4B1715-BS1)					Prepared & Analyzed: 02/21/24					
1,1-Dichloroethane	4.75	0.27	0.50	ug/l	5.00	95	70-130			
1,1-Dichloroethene	4.81	0.16	0.50	ug/l	5.00	96	70-130			
1,1-Dichloropropene	4.46	0.14	0.50	ug/l	5.00	89	70-130			
1,2,3-Trichlorobenzene	5.15	0.40	0.50	ug/l	5.00	103	70-130			
1,2,4-Trichlorobenzene	5.36	0.17	0.50	ug/l	5.00	107	70-130			
1,2,4-Trimethylbenzene	5.07	0.20	0.50	ug/l	5.00	101	70-130			
1,2-Dichloroethane	4.53	0.24	0.50	ug/l	5.00	91	70-130			
1,2-Dichloropropane	4.37	0.13	0.50	ug/l	5.00	87	70-130			
1,3,5-Trimethylbenzene	5.00	0.17	0.50	ug/l	5.00	100	70-130			
1,3-Dichloropropane	4.85	0.27	0.50	ug/l	5.00	97	70-130			
2,2-Dichloropropane	5.29	0.17	0.50	ug/l	5.00	106	70-130			
2-Butanone	3.85	1.5	5.0	ug/l	5.00	77	70-130			J
2-Chlorotoluene	5.29	0.15	0.50	ug/l	5.00	106	70-130			
2-Hexanone	4.85	1.2	5.0	ug/l	5.00	97	70-130			J
4-Chlorotoluene	5.22	0.15	0.50	ug/l	5.00	104	70-130			
4-Methyl-2-pentanone	4.95	1.8	5.0	ug/l	5.00	99	70-130			J
Acetone	51.0	3.1	5.0	ug/l	50.0	102	70-130			
Acetonitrile	17.7		1.0	ug/l	25.0	71	70-130			
Acrolein	7.05	1.9	5.0	ug/l	10.0	71	70-130			
Acrylonitrile	8.03	1.5	2.0	ug/l	10.0	80	70-130			
Allyl chloride	8.01	0.17	0.50	ug/l	5.00	160	70-130			
Benzene	4.51	0.15	0.50	ug/l	5.00	90	70-130			
Bromobenzene	5.16	0.15	0.50	ug/l	5.00	103	70-130			
Bromochloromethane	4.32	0.15	0.50	ug/l	5.00	86	70-130			
Bromodichloromethane	4.47	0.24	0.50	ug/l	5.00	89	70-130			
Bromoform	4.97	0.38	0.50	ug/l	5.00	99	70-130			
Bromomethane	4.08	0.27	0.50	ug/l	5.00	82	70-130			
Carbon Disulfide	5.08	0.25	0.50	ug/l	5.00	102	70-130			
Carbon tetrachloride	4.89	0.27	0.50	ug/l	5.00	98	70-130			
Chlorobenzene	5.14	0.15	0.50	ug/l	5.00	103	70-130			
Chloroethane	4.98	0.17	0.50	ug/l	5.00	100	70-130			
Chloroform	4.51	0.27	0.50	ug/l	5.00	90	70-130			
Chloromethane	4.70	0.23	0.50	ug/l	5.00	94	70-130			
cis-1,2-Dichloroethene	4.22	0.25	0.50	ug/l	5.00	84	70-130			
cis-1,3-Dichloropropene	5.05	0.30	0.50	ug/l	5.00	101	70-130			
Dibromochloromethane	4.80	0.20	0.50	ug/l	5.00	96	70-130			
Dibromomethane	4.55	0.20	0.50	ug/l	5.00	91	70-130			
Dichlorodifluoromethane (Freon 12)	5.10	0.45	0.50	ug/l	5.00	102	70-130			
Di-isopropyl ether	18.5	1.1	2.0	ug/l	20.0	93	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B1715 - EPA 524.2 (Continued)										
LCS (W4B1715-BS1)					Prepared & Analyzed: 02/21/24					
Ethyl methacrylate	2.94	0.51	5.0	ug/l	5.00		59 70-130			J
Ethyl tert-butyl ether	17.7	1.0	2.0	ug/l	20.0		89 70-130			
Ethylbenzene	4.82	0.21	0.50	ug/l	5.00		96 70-130			
Freon 113	5.09	1.5	5.0	ug/l	5.00		102 70-130			
Hexachlorobutadiene	5.42	0.40	0.50	ug/l	5.00		108 70-130			
Iodomethane	3.49	0.11	0.50	ug/l	5.00		70 70-130			
Isopropylbenzene	4.83	0.18	0.50	ug/l	5.00		97 70-130			
m,p-Xylene	4.91	0.33	0.50	ug/l	5.00		98 70-130			
m-Dichlorobenzene	5.10	0.14	0.50	ug/l	5.00		102 70-130			
Methacrylonitrile	16.1	0.17	0.50	ug/l	25.0		64 70-130			
Methyl methacrylate	3.66	0.080	0.50	ug/l	5.00		73 70-130			
Methyl tert-butyl ether (MTBE)	20.0	0.94	2.0	ug/l	20.0		100 70-130			
Methylene chloride	4.49	0.30	0.50	ug/l	5.00		90 70-130			
Naphthalene	4.75	0.35	0.50	ug/l	5.00		95 70-130			
n-Butylbenzene	5.40	0.29	0.50	ug/l	5.00		108 70-130			
Nitrobenzene	43.7	2.6	10	ug/l	50.0		87 70-130			
n-Propylbenzene	4.99	0.18	0.50	ug/l	5.00		100 70-130			
o-Dichlorobenzene	4.94	0.19	0.50	ug/l	5.00		99 70-130			
o-Xylene	4.85	0.20	0.50	ug/l	5.00		97 70-130			
p-Dichlorobenzene	5.23	0.18	0.50	ug/l	5.00		105 70-130			
Pentachloroethane	4.16	3.6	5.0	ug/l	5.00		83 70-130			J
p-Isopropyltoluene	5.08	0.25	0.50	ug/l	5.00		102 70-130			
sec-Butylbenzene	5.00	0.24	0.50	ug/l	5.00		100 70-130			
Styrene	5.02	0.19	0.50	ug/l	5.00		100 70-130			
Tert-amyl methyl ether	19.8	0.59	2.0	ug/l	20.0		99 70-130			
Tert-butyl alcohol	25.6	0.45	2.0	ug/l	20.0		128 70-130			
tert-Butylbenzene	4.95	0.18	0.50	ug/l	5.00		99 70-130			
Tetrachloroethene	5.55	0.18	0.50	ug/l	5.00		111 70-130			
Tetrahydrofuran	30.0	0.58	5.0	ug/l	50.0		60 70-130			
Toluene	4.76	0.29	0.50	ug/l	5.00		95 70-130			
trans-1,2-Dichloroethene	4.91	0.26	0.50	ug/l	5.00		98 70-130			
trans-1,3-Dichloropropene	5.34	0.32	0.50	ug/l	5.00		107 70-130			
trans-1,4-Dichloro-2-butene	3.95	0.17	0.50	ug/l	5.00		79 70-130			
Trichloroethene	4.66	0.18	0.50	ug/l	5.00		93 70-130			
Trichlorofluoromethane	5.17	0.18	0.50	ug/l	5.00		103 70-130			
Vinyl acetate	3.88	1.0	5.0	ug/l	5.00		78 70-130			J
Vinyl chloride	4.83	0.18	0.50	ug/l	5.00		97 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	50.5			ug/l	50.0		101 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1715 - EPA 524.2 (Continued)										
LCS (W4B1715-BS1)										
Prepared & Analyzed: 02/21/24										
<i>Surrogate(s)</i>										
4-Bromofluorobenzene	50.0			ug/l	50.0		100 70-130			
LCS Dup (W4B1715-BSD1)										
Prepared & Analyzed: 02/21/24										
1,1,1,2-Tetrachloroethane	4.62	0.24	0.50	ug/l	5.00		92 70-130	6	30	
1,1,1-Trichloroethane	4.51	0.26	0.50	ug/l	5.00		90 70-130	5	30	
1,1,2,2-Tetrachloroethane	4.58	0.20	0.50	ug/l	5.00		92 70-130	5	30	
1,1,2-Trichloroethane	4.74	0.19	0.50	ug/l	5.00		95 70-130	3	30	
1,1-Dichloroethane	4.61	0.27	0.50	ug/l	5.00		92 70-130	3	30	
1,1-Dichloroethene	4.41	0.16	0.50	ug/l	5.00		88 70-130	9	30	
1,1-Dichloropropene	4.39	0.14	0.50	ug/l	5.00		88 70-130	1	30	
1,2,3-Trichlorobenzene	4.86	0.40	0.50	ug/l	5.00		97 70-130	6	30	
1,2,4-Trichlorobenzene	5.06	0.17	0.50	ug/l	5.00		101 70-130	6	30	
1,2,4-Trimethylbenzene	4.56	0.20	0.50	ug/l	5.00		91 70-130	10	30	
1,2-Dichloroethane	4.58	0.24	0.50	ug/l	5.00		92 70-130	1	30	
1,2-Dichloropropane	4.58	0.13	0.50	ug/l	5.00		92 70-130	5	30	
1,3,5-Trimethylbenzene	4.46	0.17	0.50	ug/l	5.00		89 70-130	11	30	
1,3-Dichloropropane	4.97	0.27	0.50	ug/l	5.00		99 70-130	3	30	
2,2-Dichloropropane	5.14	0.17	0.50	ug/l	5.00		103 70-130	3	30	
2-Butanone	4.74	1.5	5.0	ug/l	5.00		95 70-130	21	30	J
2-Chlorotoluene	4.74	0.15	0.50	ug/l	5.00		95 70-130	11	30	
2-Hexanone	5.21	1.2	5.0	ug/l	5.00		104 70-130	7	30	
4-Chlorotoluene	4.75	0.15	0.50	ug/l	5.00		95 70-130	9	30	
4-Methyl-2-pentanone	5.19	1.8	5.0	ug/l	5.00		104 70-130	5	30	
Acetone	50.1	3.1	5.0	ug/l	50.0		100 70-130	2	30	
Acetonitrile	16.2		1.0	ug/l	25.0		65 70-130	8	30	
Acrolein	6.98	1.9	5.0	ug/l	10.0		70 70-130	1	30	
Acrylonitrile	7.28	1.5	2.0	ug/l	10.0		73 70-130	10	30	
Allyl chloride	6.90	0.17	0.50	ug/l	5.00		138 70-130	15	30	
Benzene	4.63	0.15	0.50	ug/l	5.00		93 70-130	3	30	
Bromobenzene	4.75	0.15	0.50	ug/l	5.00		95 70-130	8	30	
Bromochloromethane	4.72	0.15	0.50	ug/l	5.00		94 70-130	9	30	
Bromodichloromethane	4.44	0.24	0.50	ug/l	5.00		89 70-130	0.5	30	
Bromoform	4.63	0.38	0.50	ug/l	5.00		93 70-130	7	30	
Bromomethane	3.99	0.27	0.50	ug/l	5.00		80 70-130	2	30	
Carbon Disulfide	4.61	0.25	0.50	ug/l	5.00		92 70-130	10	30	
Carbon tetrachloride	4.55	0.27	0.50	ug/l	5.00		91 70-130	7	30	
Chlorobenzene	4.87	0.15	0.50	ug/l	5.00		97 70-130	6	30	
Chloroethane	4.58	0.17	0.50	ug/l	5.00		92 70-130	8	30	
Chloroform	4.50	0.27	0.50	ug/l	5.00		90 70-130	0.02	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1715 - EPA 524.2 (Continued)											
LCS Dup (W4B1715-BSD1)											
Prepared & Analyzed: 02/21/24											
Chloromethane	4.42	0.23	0.50	ug/l	5.00		88	70-130	6	30	
cis-1,2-Dichloroethene	4.61	0.25	0.50	ug/l	5.00		92	70-130	9	30	
cis-1,3-Dichloropropene	5.08	0.30	0.50	ug/l	5.00		102	70-130	0.6	30	
Dibromochloromethane	4.74	0.20	0.50	ug/l	5.00		95	70-130	1	30	
Dibromomethane	4.57	0.20	0.50	ug/l	5.00		91	70-130	0.5	30	
Dichlorodifluoromethane (Freon 12)	4.51	0.45	0.50	ug/l	5.00		90	70-130	12	30	
Di-isopropyl ether	19.3	1.1	2.0	ug/l	20.0		96	70-130	4	30	
Ethyl methacrylate	2.91	0.51	5.0	ug/l	5.00		58	70-130	0.9	30	J
Ethyl tert-butyl ether	19.3	1.0	2.0	ug/l	20.0		96	70-130	8	30	
Ethylbenzene	4.39	0.21	0.50	ug/l	5.00		88	70-130	9	30	
Freon 113	4.49	1.5	5.0	ug/l	5.00		90	70-130	13	30	J
Hexachlorobutadiene	4.95	0.40	0.50	ug/l	5.00		99	70-130	9	30	
Iodomethane	3.21	0.11	0.50	ug/l	5.00		64	70-130	8	30	
Isopropylbenzene	4.29	0.18	0.50	ug/l	5.00		86	70-130	12	30	
m,p-Xylene	4.47	0.33	0.50	ug/l	5.00		89	70-130	9	30	
m-Dichlorobenzene	4.63	0.14	0.50	ug/l	5.00		93	70-130	10	30	
Methacrylonitrile	17.0	0.17	0.50	ug/l	25.0		68	70-130	5	30	
Methyl methacrylate	3.62	0.080	0.50	ug/l	5.00		72	70-130	1	30	
Methyl tert-butyl ether (MTBE)	19.7	0.94	2.0	ug/l	20.0		99	70-130	1	30	
Methylene chloride	4.32	0.30	0.50	ug/l	5.00		86	70-130	4	30	
Naphthalene	4.64	0.35	0.50	ug/l	5.00		93	70-130	2	30	
n-Butylbenzene	4.84	0.29	0.50	ug/l	5.00		97	70-130	11	30	
Nitrobenzene	37.4	2.6	10	ug/l	50.0		75	70-130	16	30	
n-Propylbenzene	4.38	0.18	0.50	ug/l	5.00		88	70-130	13	30	
o-Dichlorobenzene	4.58	0.19	0.50	ug/l	5.00		92	70-130	8	30	
o-Xylene	4.41	0.20	0.50	ug/l	5.00		88	70-130	9	30	
p-Dichlorobenzene	4.82	0.18	0.50	ug/l	5.00		96	70-130	8	30	
Pentachloroethane	ND	3.6	5.0	ug/l	5.00			70-130	200	30	
p-Isopropyltoluene	4.53	0.25	0.50	ug/l	5.00		91	70-130	12	30	
sec-Butylbenzene	4.43	0.24	0.50	ug/l	5.00		89	70-130	12	30	
Styrene	4.66	0.19	0.50	ug/l	5.00		93	70-130	8	30	
Tert-amyl methyl ether	20.2	0.59	2.0	ug/l	20.0		101	70-130	2	30	
Tert-butyl alcohol	25.2	0.45	2.0	ug/l	20.0		126	70-130	1	30	
tert-Butylbenzene	4.43	0.18	0.50	ug/l	5.00		89	70-130	11	30	
Tetrachloroethene	5.35	0.18	0.50	ug/l	5.00		107	70-130	4	30	
Tetrahydrofuran	32.2	0.58	5.0	ug/l	50.0		64	70-130	7	30	
Toluene	4.63	0.29	0.50	ug/l	5.00		93	70-130	3	30	
trans-1,2-Dichloroethene	4.45	0.26	0.50	ug/l	5.00		89	70-130	10	30	
trans-1,3-Dichloropropene	5.34	0.32	0.50	ug/l	5.00		107	70-130	0.08	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1715 - EPA 524.2 (Continued)										
LCS Dup (W4B1715-BSD1)					Prepared & Analyzed: 02/21/24					
trans-1,4-Dichloro-2-butene	2.63	0.17	0.50	ug/l	5.00		53 70-130	40	30	
Trichloroethene	4.68	0.18	0.50	ug/l	5.00		94 70-130	0.4	30	
Trichlorofluoromethane	4.62	0.18	0.50	ug/l	5.00		92 70-130	11	30	
Vinyl acetate	3.61	1.0	5.0	ug/l	5.00		72 70-130	7	30	J
Vinyl chloride	4.46	0.18	0.50	ug/l	5.00		89 70-130	8	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	47.6			ug/l	50.0		95 70-130			
4-Bromofluorobenzene	47.2			ug/l	50.0		94 70-130			
Matrix Spike (W4B1715-MS1)					Source: 4A22028-01		Prepared: 02/21/24 Analyzed: 02/22/24			
1,1-Dichloroethene	5.09	0.16	0.50	ug/l	5.00	ND	102 70-130			
Benzene	5.31	0.15	0.50	ug/l	5.00	ND	106 70-130			
Chlorobenzene	5.91	0.15	0.50	ug/l	5.00	0.194	114 70-130			
Tert-butyl alcohol	8.47	0.45	2.0	ug/l	20.0	ND	42 0-200			
Toluene	6.94	0.29	0.50	ug/l	5.00	2.21	95 70-130			
Trichloroethene	5.28	0.18	0.50	ug/l	5.00	ND	106 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	51.3			ug/l	50.0		103 70-130			
4-Bromofluorobenzene	51.1			ug/l	50.0		102 70-130			
Matrix Spike Dup (W4B1715-MSD1)					Source: 4A22028-01		Prepared: 02/21/24 Analyzed: 02/22/24			
1,1-Dichloroethene	4.90	0.16	0.50	ug/l	5.00	ND	98 70-130	4	30	
Benzene	5.60	0.15	0.50	ug/l	5.00	ND	112 70-130	5	30	
Chlorobenzene	7.03	0.15	0.50	ug/l	5.00	0.194	137 70-130	17	30	MS-05
Tert-butyl alcohol	6.60	0.45	2.0	ug/l	20.0	ND	33 0-200	25	200	
Toluene	7.70	0.29	0.50	ug/l	5.00	2.21	110 70-130	10	30	
Trichloroethene	5.58	0.18	0.50	ug/l	5.00	ND	112 70-130	6	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	49.0			ug/l	50.0		98 70-130			
4-Bromofluorobenzene	48.7			ug/l	50.0		97 70-130			
Batch: W4B2189 - EPA 524.2										
Blank (W4B2189-BLK1)					Prepared: 02/27/24 Analyzed: 02/28/24					
Acetonitrile	ND		1.0	ug/l						
Acrolein	ND	1.9	5.0	ug/l						
Acrylonitrile	ND	1.5	2.0	ug/l						
Allyl chloride	ND	0.17	0.50	ug/l						
Ethyl methacrylate	ND	0.51	5.0	ug/l						
Iodomethane	ND	0.11	0.50	ug/l						
Methacrylonitrile	ND	0.17	0.50	ug/l						
Methyl methacrylate	ND	0.080	0.50	ug/l						
Nitrobenzene	ND	2.6	10	ug/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2189 - EPA 524.2 (Continued)										
Blank (W4B2189-BLK1)					Prepared: 02/27/24 Analyzed: 02/28/24					
Pentachloroethane	ND	3.6	5.0	ug/l						
Tetrahydrofuran	ND	0.58	5.0	ug/l						
trans-1,4-Dichloro-2-butene	ND	0.17	0.50	ug/l						
Vinyl acetate	ND	1.0	5.0	ug/l						
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	49.5			ug/l	50.0		99 70-130			
4-Bromofluorobenzene	50.2			ug/l	50.0		100 70-130			
LCS (W4B2189-BS1)					Prepared: 02/27/24 Analyzed: 02/28/24					
Acetonitrile	22.5		1.0	ug/l	25.0		90 70-130			
Acrolein	9.74	1.9	5.0	ug/l	10.0		97 70-130			
Acrylonitrile	15.5	1.5	2.0	ug/l	10.0		155 70-130			Q-08
Allyl chloride	4.69	0.17	0.50	ug/l	5.00		94 70-130			
Ethyl methacrylate	7.10	0.51	5.0	ug/l	5.00		142 70-130			Q-08
Iodomethane	4.69	0.11	0.50	ug/l	5.00		94 70-130			
Methacrylonitrile	23.4	0.17	0.50	ug/l	25.0		94 70-130			
Methyl methacrylate	11.6	0.080	0.50	ug/l	5.00		233 70-130			Q-08
Nitrobenzene	44.2	2.6	10	ug/l	50.0		88 70-130			
Pentachloroethane	5.68	3.6	5.0	ug/l	5.00		114 70-130			
Tetrahydrofuran	43.2	0.58	5.0	ug/l	50.0		86 70-130			
trans-1,4-Dichloro-2-butene	7.13	0.17	0.50	ug/l	5.00		143 70-130			Q-08
Vinyl acetate	5.91	1.0	5.0	ug/l	5.00		118 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	57.3			ug/l	50.0		115 70-130			
4-Bromofluorobenzene	56.7			ug/l	50.0		113 70-130			
LCS Dup (W4B2189-BSD1)					Prepared: 02/27/24 Analyzed: 02/28/24					
Acetonitrile	21.3		1.0	ug/l	25.0		85 70-130	6	30	
Acrolein	9.80	1.9	5.0	ug/l	10.0		98 70-130	0.6	30	
Acrylonitrile	15.8	1.5	2.0	ug/l	10.0		158 70-130	2	30	Q-08
Allyl chloride	4.07	0.17	0.50	ug/l	5.00		81 70-130	14	30	
Ethyl methacrylate	7.02	0.51	5.0	ug/l	5.00		140 70-130	1	30	Q-08
Iodomethane	4.52	0.11	0.50	ug/l	5.00		90 70-130	4	30	
Methacrylonitrile	23.5	0.17	0.50	ug/l	25.0		94 70-130	0.5	30	
Methyl methacrylate	11.4	0.080	0.50	ug/l	5.00		229 70-130	2	30	Q-08
Nitrobenzene	42.6	2.6	10	ug/l	50.0		85 70-130	4	30	
Pentachloroethane	5.31	3.6	5.0	ug/l	5.00		106 70-130	7	30	
Tetrahydrofuran	43.5	0.58	5.0	ug/l	50.0		87 70-130	0.7	30	
trans-1,4-Dichloro-2-butene	6.49	0.17	0.50	ug/l	5.00		130 70-130	9	30	
Vinyl acetate	6.14	1.0	5.0	ug/l	5.00		123 70-130	4	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	56.3			ug/l	50.0		113 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:37

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2189 - EPA 524.2 (Continued)											
LCS Dup (W4B2189-BSD1)						Prepared: 02/27/24 Analyzed: 02/28/24					
<i>Surrogate(s)</i>											
4-Bromofluorobenzene	55.3			ug/l	50.0		111	70-130			

Quality Control Results

(Continued)

Volatile Organics by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2414 - EPA 524.3											
Blank (W4B2414-BLK1)						Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l							
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.426			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.413			ug/l	0.400		103	70-130			
LCS (W4B2414-BS1)						Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	0.0625	0.0042	0.010	ug/l	0.0500		125	70-130			
1,2-Dibromoethane (EDB)	0.0563	0.0029	0.020	ug/l	0.0500		113	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.419			ug/l	0.400		105	70-130			
4-Bromofluorobenzene	0.409			ug/l	0.400		102	70-130			
LCS Dup (W4B2414-BSD1)						Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	0.0608	0.0042	0.010	ug/l	0.0500		122	70-130	3	30	
1,2-Dibromoethane (EDB)	0.0569	0.0029	0.020	ug/l	0.0500		114	70-130	1	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.422			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.414			ug/l	0.400		104	70-130			
Duplicate (W4B2414-DUP1)						Source: 4B15126-01 Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l		ND				30	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l		ND				30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.425			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.415			ug/l	0.400		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:37

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
E-01	The concentration indicated for this analyte is an estimated value above the calibration range.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
Q-02	Low recovery of this analyte in the QC sample. The analysis of the low level standard produced acceptable recovery indicating that the sample result might be accurately reported as Not Detected.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
U	Result not detected above the detection limit
%REC	Percent Recovery
Dil	Dilution
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20063

Report Date: 4/04/2024

Received Date: 2/17/2024

Project: COSM 97-005 - DDW Standards

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

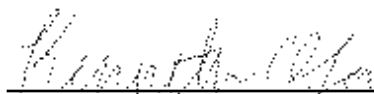
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/17/24 with the Chain-of-Custody document. The samples were received in good condition, at 13.3 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-6-S22	Client	4B20063-01	Water	02/17/24 11:32	
AT-RES-3-S22	Client	4B20063-02	Water	02/16/24 19:40	
Field Blank	Client	4B20063-03	Water	02/16/24 19:40	
Field Blank	Client	4B20063-04	Water	02/17/24 11:32	
Field Blank	Client	4B20063-05	Water	02/15/24 18:55	
AT-RES-1-S22	Client	4B20063-06	Water	02/15/24 18:55	
AT-RES-1-S22	Client	4B20063-07	Water	02/16/24 19:40	
Field Blank	Client	4B20063-08	Water	02/13/24 15:25	
AT-RES-2-S22	Client	4B20063-09	Water	02/13/24 19:25	
AT-RES-2-S22	Client	4B20063-10	Water	02/17/24 14:30	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 1613B in Water				
2,3,7,8-TCDD (Dioxin)	1746-01-6		⊗	
EPA 508.1 in Water				
Aldrin	309-00-2	⊗		⊗
alpha-BHC	319-84-6	⊗		⊗
beta-BHC	319-85-7	⊗		⊗
delta-BHC	319-86-8	⊗		⊗
gamma-BHC (Lindane)	58-89-9			⊗
4,4'-DDD	72-54-8	⊗		⊗
4,4'-DDE	72-55-9	⊗		⊗
4,4'-DDT	50-29-3	⊗		⊗
Dieldrin	60-57-1	⊗		⊗
Endosulfan I	959-98-8	⊗		⊗
Endosulfan II	33213-65-9	⊗		⊗
Endosulfan sulfate	1031-07-8	⊗		⊗
Endrin aldehyde	7421-93-4	⊗		⊗
Chlorothalonil	1897-45-6	⊗	⊗	⊗
Trifluralin	1582-09-8	⊗		⊗
Toxaphene	8001-35-2			⊗
PCBs, Total				⊗
EPA 515.4 in Water				
3,5-Dichlorobenzoic acid	51-36-5	⊗		⊗
Dichloroprop	120-36-5	⊗		⊗
2,4,5-T	93-76-5	⊗		⊗
2,4-DB	94-82-6	⊗		⊗
DCPA	1861-32-1	⊗		⊗
Acifluorfen	50594-66-6	⊗		⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 515.4 in Water (Continued)				
Chloramben	133-90-4	⊗	⊗	⊗
EPA 521 in Water				
N-Nitrosodimethylamine	62-75-9	⊗	⊗	⊗
N-Nitrosomethylethylamine	10595-95-6	⊗	⊗	⊗
N-Nitrosodiethylamine	55-18-5	⊗	⊗	⊗
N-Nitrosodi-n-propylamine	621-64-7	⊗	⊗	⊗
N-Nitrosomorpholine	59-89-2	⊗	⊗	⊗
N-Nitrosopyrrolidine	930-55-2	⊗	⊗	⊗
N-Nitrosopiperidine	100-75-4	⊗	⊗	⊗
N-Nitrosodi-n-butylamine	924-16-3	⊗	⊗	⊗
NDMA-d6		⊗	⊗	⊗
EPA 525.2 in Water				
Bromacil	314-40-9	⊗		⊗
Captan	133-06-2	⊗	⊗	⊗
Chlorpropham	101-21-3	⊗		⊗
Diazinon	333-41-5	⊗		⊗
Dimethoate	60-51-5	⊗	⊗	⊗
Diphenamid	957-51-7	⊗		⊗
Disulfoton	298-04-4	⊗		⊗
EPTC	759-94-4	⊗		⊗
Metolachlor	51218-45-2	⊗		⊗
Metribuzin	21087-64-9	⊗		⊗
Prometryn	7287-19-6	⊗		⊗
Terbacil	5902-51-2	⊗		⊗
Trithion	786-19-6	⊗	⊗	⊗
EPA 531.2 in Water				
Propoxur (Baygon)	114-26-1	⊗		⊗
Methiocarb	2032-65-7	⊗		⊗
EPA 556 in Water				
Formaldehyde	50-00-0	⊗	⊗	⊗
2,4,5-TFAP	129322-83-4	⊗	⊗	⊗
EPA 8015B in Water				
Ethylene glycol	107-21-1	⊗		⊗
EPA 8330A in Water				
HMX	2691-41-0	⊗		⊗
RDX	121-82-4	⊗		⊗
1,3,5-Trinitrobenzene	99-35-4			⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 8330A in Water (Continued)				
1,3-Dinitrobenzene	99-65-0			⊗
Nitrobenzene	98-95-3			⊗
Tetryl	479-45-8	⊗		⊗
2,4,6-Trinitrotoluene	118-96-7			⊗
4-Amino-2,6-Dinitrotoluene	19406-51-0	⊗	⊗	⊗
2-Amino-4,6-Dinitrotoluene	35572-78-2	⊗		⊗
2,6-Dinitrotoluene	606-20-2			⊗
2,4-Dinitrotoluene	121-14-2			⊗
2-Nitrotoluene	88-72-2			⊗
4-Nitrotoluene	99-99-0			⊗
3-Nitrotoluene	99-08-1			⊗
EPA 900.0 in Water				
Gross Alpha			⊗	
Gross Beta			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:32 by Client

4B20063-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Aldehydes and Carbonyl Compounds by GC/ECD							
Method: EPA 556			Instr: GC08				
Batch ID: W4B1809		Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08	
Formaldehyde	12	0.86	2.0	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
2,4,5-TFAP	106%	Conc: 20.7	70-130			03/02/24	

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 531.2			Instr: LC11				
Batch ID: W4B2044		Preparation: _NONE (LC)		Prepared: 02/25/24 10:29		Analyst: cam	
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l	1	02/26/24	
Aldicarb	ND	0.58	2.0	ug/l	1	02/26/24	
Aldicarb sulfone	ND	0.73	2.0	ug/l	1	02/26/24	
Aldicarb sulfoxide	ND	1.0	2.0	ug/l	1	02/26/24	
Carbaryl	ND	1.0	2.0	ug/l	1	02/26/24	
Carbofuran	ND	1.0	2.0	ug/l	1	02/26/24	
Methiocarb	ND	1.0	2.0	ug/l	1	02/26/24	
Methomyl	ND	1.3	2.0	ug/l	1	02/26/24	
Oxamyl	ND	1.1	2.0	ug/l	1	02/26/24	
Propoxur (Baygon)	ND	1.4	2.0	ug/l	1	02/26/24	
<i>Surrogate(s)</i>							
BDMC	119%	Conc: 11.9	70-130			02/26/24	

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 515.4			Instr: GC08				
Batch ID: W4B2149		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/27/24 08:15		Analyst: alf	
2,4,5-T	ND	0.065	0.20	ug/l	1	03/12/24	
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l	1	03/12/24	
2,4-D	ND	0.14	0.40	ug/l	1	03/12/24	
2,4-DB	ND	0.19	2.0	ug/l	1	03/12/24	
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l	1	03/12/24	
Acifluorfen	ND	0.030	0.40	ug/l	1	03/12/24	
Bentazon	ND	0.23	2.0	ug/l	1	03/12/24	
Dalapon	ND	0.11	0.40	ug/l	1	03/12/24	
DCPA	ND	0.029	0.10	ug/l	1	03/12/24	
Dicamba	ND	0.15	0.60	ug/l	1	03/12/24	
Dichloroprop	ND	0.12	0.30	ug/l	1	03/12/24	
Dinoseb	ND	0.033	0.40	ug/l	1	03/12/24	
Pentachlorophenol	ND	0.014	0.20	ug/l	1	03/12/24	
Picloram	ND	0.050	0.60	ug/l	1	03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:32 by Client

4B20063-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Acids Herbicides by GC/ECD (Continued)							
Method: EPA 515.4				Instr: GC08			
Batch ID: W4B2149		Preparation: EPA 515.4/Micro Ext. Drtz		Prepared: 02/27/24 08:15		Analyst: alf	
<i>Surrogate(s)</i>							
2,4-DCAA	67%	Conc: 6.73	70-130			03/12/24	S-04

Chlorinated Pesticides and/or PCBs by GC/ECD

Method: EPA 508.1				Instr: GC08			
Batch ID: W4B2423		Preparation: EPA 508.1/SPE		Prepared: 02/29/24 08:34		Analyst: alf	
4,4'-DDD	ND	0.0030	0.010	ug/l	1	03/06/24	
4,4'-DDE	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
4,4'-DDT	ND	0.0030	0.010	ug/l	1	03/06/24	
Aldrin	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
alpha-BHC	ND	0.0015	0.010	ug/l	1	03/06/24	
Aroclor 1016	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1221	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1232	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1242	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1248	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1254	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1260	ND	0.10	0.10	ug/l	1	03/06/24	Q-02
beta-BHC	ND	0.010	0.010	ug/l	1	03/06/24	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	03/06/24	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	03/06/24	
delta-BHC	ND	0.0030	0.010	ug/l	1	03/06/24	
Dieldrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endosulfan I	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endosulfan II	ND	0.0019	0.010	ug/l	1	03/06/24	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	03/06/24	
Heptachlor	ND	0.0031	0.010	ug/l	1	03/06/24	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	03/06/24	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	03/06/24	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	03/06/24	
Methoxychlor	ND	0.0030	0.010	ug/l	1	03/06/24	
PCBs, Total	ND	0.10	0.50	ug/l	1	03/06/24	
Propachlor	ND	0.045	0.20	ug/l	1	03/06/24	

4B20063

Page 6 of 63

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:32 by Client

4B20063-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1

Instr: GC08

Batch ID: W4B2423

Preparation: EPA 508.1/SPE

Prepared: 02/29/24 08:34

Analyst: alf

Toxaphene ND 0.37 1.0 ug/l 1 03/06/24

Trifluralin ND 0.0043 0.010 ug/l 1 03/06/24

Surrogate(s)

4,4-Dibromobiphenyl 105% Conc: 0.100 70-130 03/06/24

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 335.4

Instr: AA01

Batch ID: W4B2277

Preparation: _NONE (WETCHEM)

Prepared: 02/27/24 19:14

Analyst: KAC

Cyanide, Total ND 5.0 5.0 ug/l 1 02/28/24

Diquat and Paraquat by EPA 549.2

Method: EPA 549.2

Instr: LC10

Batch ID: W4B1814

Preparation: EPA 549.2/SPE

Prepared: 02/22/24 08:48

Analyst: cam

Diquat ND 1.2 4.0 ug/l 1 02/28/24

Endothall By EPA 548.1

Method: EPA 548.1

Instr: GCMS06

Batch ID: W4B1800

Preparation: EPA 548.1/SPE

Prepared: 02/22/24 07:49

Analyst: rmr

Endothall ND 11 45 ug/l 1 02/27/24

Explosives by EPA Method 8330

Method: EPA 8330A

Instr: LC10

Batch ID: W4B1813

Preparation: Method (SPE)

Prepared: 02/23/24 08:46

Analyst: cam

1,3,5-Trinitrobenzene ND 0.31 1.0 ug/l 1 03/13/24

1,3-Dinitrobenzene ND 0.15 1.0 ug/l 1 03/13/24

2,4,6-Trinitrotoluene ND 0.34 1.0 ug/l 1 03/13/24

2,4-Dinitrotoluene ND 0.34 1.0 ug/l 1 03/13/24

2,6-Dinitrotoluene ND 0.20 1.0 ug/l 1 03/13/24

2-Amino-4,6-Dinitrotoluene ND 0.35 1.0 ug/l 1 03/13/24

2-Nitrotoluene ND 0.21 1.0 ug/l 1 03/13/24

3-Nitrotoluene ND 0.37 1.0 ug/l 1 03/13/24

4-Amino-2,6-Dinitrotoluene ND 0.17 1.0 ug/l 1 03/13/24

4-Nitrotoluene ND 0.27 1.0 ug/l 1 03/13/24

HMX ND 0.30 1.0 ug/l 1 03/13/24

Nitrobenzene ND 0.16 1.0 ug/l 1 03/13/24

RDX ND 0.33 1.0 ug/l 1 03/13/24

Tetryl ND 0.45 1.0 ug/l 1 03/13/24

Glycols by GC/FID

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:32 by Client

4B20063-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Glycols by GC/FID (Continued)

Method: EPA 8015B

Instr: GC09

Batch ID: W4B1920

Preparation: _NONE (SVOC)

Prepared: 02/22/24 16:00

Analyst: alf

Ethylene glycol ND 4.7 10 mg/l 1 02/22/24

Surrogate(s)

1-Propanol 117% Conc: 117 50-150 02/22/24

Glyphosate by EPA 547

Method: EPA 547

Instr: LC11

Batch ID: W4B2068

Preparation: _NONE (LC)

Prepared: 02/26/24 08:52

Analyst: cam

Glyphosate ND 1.8 5.0 ug/l 1 02/27/24

Haloacetic Acids (HAAs) by GC/ECD

Method: EPA 552.3

Instr: GC05

Batch ID: W4B1637

Preparation: EPA 552.3/Micro Ext. Drtz

Prepared: 02/21/24 08:38

Analyst: ecs

Dibromoacetic acid (dbaa) 0.64 0.28 1.0 ug/l 1 03/05/24

Dichloroacetic acid (dcaa) ND 0.29 1.0 ug/l 1 03/05/24

Monobromoacetic acid (mbaa) ND 0.34 1.0 ug/l 1 03/05/24

Monochloroacetic acid (mcaa) ND 0.31 2.0 ug/l 1 03/05/24

Trichloroacetic acid (tcaa) ND 0.29 1.0 ug/l 1 03/05/24

Surrogate(s)

2-Bromobutyric acid 108% Conc: 10.8 70-130 03/05/24

Metals by EPA 200 Series Methods

Method: EPA 245.1

Instr: HG03

Batch ID: W4B2303

Preparation: EPA 245.1

Prepared: 02/28/24 09:15

Analyst: kjo

Mercury, Total ND 0.037 0.050 ug/l 1 03/01/24

Nitrosamines by CI GC/MS/MS, EPA 521

Method: EPA 521

Instr: GCMS09

Batch ID: W4B2292

Preparation: EPA 521/SPE

Prepared: 02/28/24 08:07

Analyst: mld

N-Nitrosodiethylamine ND 0.66 2.0 ng/l 1 03/05/24

N-Nitrosodimethylamine ND 1.3 2.0 ng/l 1 03/05/24

N-Nitrosodi-n-butylamine ND 0.53 2.0 ng/l 1 03/05/24

N-Nitrosodi-n-propylamine ND 0.62 2.0 ng/l 1 03/05/24

N-Nitrosomethylethylamine ND 0.54 2.0 ng/l 1 03/05/24

N-Nitrosomorpholine ND 0.68 2.0 ng/l 1 03/05/24

N-Nitrosopiperidine ND 0.65 2.0 ng/l 1 03/05/24

N-Nitrosopyrrolidine ND 0.62 2.0 ng/l 1 03/05/24

Surrogate(s)

NDMA-d6 101% Conc: 25.6 70-130 03/05/24

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

4B20063

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:32 by Client

4B20063-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0509

Preparation: EPA 533/SPE

Prepared: 03/07/24 09:21

Analyst: ajc

11CI-PF3OUdS	ND	0.75	1.7	ng/l	1	03/10/24	
4:2 FTS	ND	0.71	1.7	ng/l	1	03/10/24	
6:2 FTS	ND	0.66	1.7	ng/l	1	03/10/24	
8:2 FTS	ND	0.57	1.7	ng/l	1	03/10/24	
9CI-PF3ONS	ND	0.72	1.7	ng/l	1	03/10/24	
ADONA	ND	0.60	1.7	ng/l	1	03/10/24	
HFPO-DA	ND	0.78	1.7	ng/l	1	03/10/24	
NFDHA	ND	0.63	1.7	ng/l	1	03/10/24	
PFBA	ND	0.52	1.7	ng/l	1	03/10/24	
PFBS	ND	0.39	1.7	ng/l	1	03/10/24	
PFDA	ND	0.55	1.7	ng/l	1	03/10/24	
PFDoA	ND	0.55	1.7	ng/l	1	03/10/24	
PFEESA	ND	0.38	1.7	ng/l	1	03/10/24	
PFHpA	ND	0.55	1.7	ng/l	1	03/10/24	
PFHpS	ND	0.51	1.7	ng/l	1	03/10/24	
PFHxA	ND	0.61	1.7	ng/l	1	03/10/24	
PFHxS	ND	0.84	1.7	ng/l	1	03/10/24	
PFMBA	ND	0.53	1.7	ng/l	1	03/10/24	
PFMPA	ND	0.36	1.7	ng/l	1	03/10/24	
PFNA	ND	0.75	1.7	ng/l	1	03/10/24	
PFOA	ND	0.78	1.7	ng/l	1	03/10/24	
PFOS	ND	0.58	1.7	ng/l	1	03/10/24	
PFPeA	ND	0.38	1.7	ng/l	1	03/10/24	
PFPeS	ND	0.42	1.7	ng/l	1	03/10/24	
PFUnA	ND	0.50	1.7	ng/l	1	03/10/24	

Surrogate(s)

13C2-4:2 FTS	99%	Conc: 33.8	50-200	03/10/24
13C2-6:2 FTS	100%	Conc: 34.1	50-200	03/10/24
13C2-8:2 FTS	102%	Conc: 34.7	50-200	03/10/24
13C2-PFDoA	99%	Conc: 8.41	50-200	03/10/24
13C3-PFBS	110%	Conc: 9.37	50-200	03/10/24
13C3-PFHxS	107%	Conc: 9.12	50-200	03/10/24
13C4-PFBA	98%	Conc: 8.36	50-200	03/10/24
13C4-PFHpA	97%	Conc: 8.22	50-200	03/10/24
13C5-PFHxA	96%	Conc: 8.20	50-200	03/10/24

4B20063

Page 9 of 63

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:32 by Client

4B20063-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0509		Preparation: EPA 533/SPE		Prepared: 03/07/24 09:21		Analyst: ajc	
13C5-PFPeA	101%	Conc: 8.61	50-200			03/10/24	
13C6-PFDA	103%	Conc: 8.76	50-200			03/10/24	
13C7-PFUnA	99%	Conc: 8.45	50-200			03/10/24	
13C8-PFOA	95%	Conc: 8.10	50-200			03/10/24	
13C8-PFOS	113%	Conc: 9.60	50-200			03/10/24	
13C9-PFNA	100%	Conc: 8.53	50-200			03/10/24	
HFPO-DA-13C3	97%	Conc: 8.22	50-200			03/10/24	

Perchlorate by EPA 314.0

Method: EPA 314.0			Instr: LC08_Channel1				
Batch ID: W4B1668		Preparation: _NONE (LC)		Prepared: 02/21/24 10:28		Analyst: CLL	
Perchlorate	ND	0.26	1.0	ug/l	1	02/22/24	

Radiological Parameters by APHA/EPA Methods

Method: EPA 900.0			Instr: RAD01				
Batch ID: W4C0565		Preparation: _NONE (RADIOCHEM)		Prepared: 03/07/24 12:40		Analyst: ela	
Gross Alpha	-0.767			pCi/L	1	03/16/24	
Counting Uncertainty:	0.552	MDA: 0.906					
Gross Beta	-0.185			pCi/L	1	03/16/24	
Counting Uncertainty:	0.598	MDA: 1.004					

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2			Instr: GCMS16				
Batch ID: W4B2424		Preparation: EPA 525.2/SPE		Prepared: 02/29/24 08:39		Analyst: rmr	
Alachlor	ND	0.063	0.10	ug/l	1	03/09/24	
Atrazine	ND	0.042	0.10	ug/l	1	03/09/24	
Benzo (a) pyrene	ND	0.045	0.10	ug/l	1	03/09/24	
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l	1	03/09/24	
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l	1	03/09/24	
Bromacil	ND	0.24	0.50	ug/l	1	03/09/24	
Butachlor	ND	0.040	0.10	ug/l	1	03/09/24	
Captan	ND	0.32	1.0	ug/l	1	03/09/24	
Chlorpropham	ND	0.040	0.10	ug/l	1	03/09/24	
Diazinon	ND	0.022	0.10	ug/l	1	03/09/24	
Dimethoate	ND	0.041	0.20	ug/l	1	03/09/24	
Diphenamid	ND	0.030	0.10	ug/l	1	03/09/24	
Disulfoton	ND	0.11	0.20	ug/l	1	03/09/24	
EPTC	ND	0.020	0.10	ug/l	1	03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-6-S22

Sampled: 02/17/24 11:32 by Client

4B20063-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Semivolatile Organic Compounds by GC/MS (Continued)

Method: EPA 525.2

Instr: GCMS16

Batch ID: W4B2424

Preparation: EPA 525.2/SPE

Prepared: 02/29/24 08:39

Analyst: rmr

Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l	1	03/09/24	
Metolachlor	ND	0.030	0.10	ug/l	1	03/09/24	
Metribuzin	ND	0.030	0.10	ug/l	1	03/09/24	
Molinate	ND	0.030	0.10	ug/l	1	03/09/24	
Prometryn	ND	0.030	0.10	ug/l	1	03/09/24	
Simazine	ND	0.058	0.10	ug/l	1	03/09/24	
Terbacil	ND	0.090	2.0	ug/l	1	03/09/24	
Thiobencarb	ND	0.069	0.10	ug/l	1	03/09/24	
Trithion	ND	0.054	0.10	ug/l	1	03/09/24	

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	114%	Conc: 5.40	70-130			03/09/24	
Perylene-d12	78%	Conc: 3.69	50-120			03/09/24	
Triphenyl phosphate	72%	Conc: 3.42	70-130			03/09/24	

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 1613B

Instr: GCMS15

Batch ID: W4C0010

Preparation: EPA 3510C

Prepared: 03/01/24 07:56

Analyst: AJC

2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	1	03/05/24	
-----------------------	----	------	------	------	---	----------	--

Volatile Organics by P&T and GC/MS

Method: EPA 524.3

Instr: GCMS04

Batch ID: W4B2414

Preparation: Method (P+T)

Prepared: 02/29/24 07:37

Analyst: ADM

1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l	1	02/29/24	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	106%	Conc: 0.426	70-130			02/29/24	
4-Bromofluorobenzene	104%	Conc: 0.414	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/16/24 19:40 by Client

4B20063-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Aldehydes and Carbonyl Compounds by GC/ECD							
Method: EPA 556			Instr: GC08				
Batch ID: W4B1809		Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08	
Formaldehyde	10	0.86	2.0	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
2,4,5-TFAP	99%	Conc: 18.9	70-130			03/02/24	

Explosives by EPA Method 8330

Method: EPA 8330A			Instr: LC10				
Batch ID: W4B1813		Preparation: Method (SPE)		Prepared: 02/23/24 08:46		Analyst: cam	
1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l	1	03/13/24	
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l	1	03/13/24	
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l	1	03/13/24	
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l	1	03/13/24	
2-Nitrotoluene	ND	0.21	1.0	ug/l	1	03/13/24	
3-Nitrotoluene	ND	0.37	1.0	ug/l	1	03/13/24	
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l	1	03/13/24	
4-Nitrotoluene	ND	0.27	1.0	ug/l	1	03/13/24	
HMX	ND	0.30	1.0	ug/l	1	03/13/24	
Nitrobenzene	ND	0.16	1.0	ug/l	1	03/13/24	
RDX	ND	0.33	1.0	ug/l	1	03/13/24	
Tetryl	ND	0.45	1.0	ug/l	1	03/13/24	

Glycols by GC/FID

Method: EPA 8015B			Instr: GC09				
Batch ID: W4B1920		Preparation: _NONE (SVOC)		Prepared: 02/22/24 16:00		Analyst: alf	
Ethylene glycol	ND	4.7	10	mg/l	1	02/22/24	
<i>Surrogate(s)</i>							
1-Propanol	97%	Conc: 97.2	50-150			02/22/24	

Nitrosamines by CI GC/MS/MS, EPA 521

Method: EPA 521			Instr: GCMS09				
Batch ID: W4B2291		Preparation: EPA 521/SPE		Prepared: 02/28/24 08:04		Analyst: mld	
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l	1	03/01/24	
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l	1	03/01/24	
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l	1	03/01/24	
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l	1	03/01/24	
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l	1	03/01/24	
N-Nitrosomorpholine	ND	0.68	2.0	ng/l	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/16/24 19:40 by Client

4B20063-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Nitrosamines by CI GC/MS/MS, EPA 521 (Continued)							
Method: EPA 521			Instr: GCMS09				
Batch ID: W4B2291		Preparation: EPA 521/SPE		Prepared: 02/28/24 08:04		Analyst: mld	
N-Nitrosopiperidine	ND	0.65	2.0	ng/l	1	03/01/24	
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l	1	03/01/24	
<i>Surrogate(s)</i>							
NDMA-d6	103%	Conc: 26.9	70-130			03/01/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0509		Preparation: EPA 533/SPE		Prepared: 03/07/24 09:21		Analyst: ajc	
11CI-PF3OUdS	ND	0.73	1.6	ng/l	1	03/10/24	
4:2 FTS	ND	0.68	1.6	ng/l	1	03/10/24	
6:2 FTS	ND	0.64	1.6	ng/l	1	03/10/24	
8:2 FTS	ND	0.56	1.6	ng/l	1	03/10/24	
9CI-PF3ONS	ND	0.69	1.6	ng/l	1	03/10/24	
ADONA	ND	0.58	1.6	ng/l	1	03/10/24	
HFPO-DA	ND	0.76	1.6	ng/l	1	03/10/24	
NFDHA	ND	0.61	1.6	ng/l	1	03/10/24	
PFBA	ND	0.50	1.6	ng/l	1	03/10/24	
PFBS	ND	0.38	1.6	ng/l	1	03/10/24	
PFDA	ND	0.53	1.6	ng/l	1	03/10/24	
PFDoA	ND	0.53	1.6	ng/l	1	03/10/24	
PFEESA	ND	0.37	1.6	ng/l	1	03/10/24	
PFHpA	ND	0.53	1.6	ng/l	1	03/10/24	
PFHpS	ND	0.49	1.6	ng/l	1	03/10/24	
PFHxA	ND	0.59	1.6	ng/l	1	03/10/24	
PFHxS	ND	0.82	1.6	ng/l	1	03/10/24	
PFMBA	ND	0.51	1.6	ng/l	1	03/10/24	
PFMPA	ND	0.35	1.6	ng/l	1	03/10/24	
PFNA	ND	0.72	1.6	ng/l	1	03/10/24	
PFOA	ND	0.76	1.6	ng/l	1	03/10/24	
PFOS	ND	0.56	1.6	ng/l	1	03/10/24	
PFPeA	ND	0.37	1.6	ng/l	1	03/10/24	
PFPeS	ND	0.41	1.6	ng/l	1	03/10/24	
PFOUnA	ND	0.49	1.6	ng/l	1	03/10/24	
<i>Surrogate(s)</i>							
13C2-4:2 FTS	93%	Conc: 30.7	50-200			03/10/24	
13C2-6:2 FTS	93%	Conc: 30.6	50-200			03/10/24	

4B20063

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-3-S22

Sampled: 02/16/24 19:40 by Client

4B20063-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0509		Preparation: EPA 533/SPE		Prepared: 03/07/24 09:21		Analyst: ajc	
13C2-8:2 FTS	95%	Conc: 31.3	50-200			03/10/24	
13C2-PFDoA	92%	Conc: 7.60	50-200			03/10/24	
13C3-PFBS	111%	Conc: 9.10	50-200			03/10/24	
13C3-PFHxS	105%	Conc: 8.61	50-200			03/10/24	
13C4-PFBA	105%	Conc: 8.63	50-200			03/10/24	
13C4-PFHpA	99%	Conc: 8.13	50-200			03/10/24	
13C5-PFHxA	98%	Conc: 8.07	50-200			03/10/24	
13C5-PFPeA	106%	Conc: 8.71	50-200			03/10/24	
13C6-PFDA	95%	Conc: 7.83	50-200			03/10/24	
13C7-PFUnA	90%	Conc: 7.40	50-200			03/10/24	
13C8-PFOA	95%	Conc: 7.80	50-200			03/10/24	
13C8-PFOS	108%	Conc: 8.90	50-200			03/10/24	
13C9-PFNA	96%	Conc: 7.86	50-200			03/10/24	
HFPO-DA-13C3	93%	Conc: 7.68	50-200			03/10/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/16/24 19:40 by Client

4B20063-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0509

Preparation: EPA 533/SPE

Prepared: 03/07/24 09:21

Analyst: ajc

11CI-PF3OUdS	ND	0.70	1.6	ng/l	1	03/10/24	
4:2 FTS	ND	0.66	1.6	ng/l	1	03/10/24	
6:2 FTS	ND	0.62	1.6	ng/l	1	03/10/24	
8:2 FTS	ND	0.54	1.6	ng/l	1	03/10/24	
9CI-PF3ONS	ND	0.67	1.6	ng/l	1	03/10/24	
ADONA	ND	0.56	1.6	ng/l	1	03/10/24	
HFPO-DA	ND	0.73	1.6	ng/l	1	03/10/24	
NFDHA	ND	0.59	1.6	ng/l	1	03/10/24	
PFBA	ND	0.48	1.6	ng/l	1	03/10/24	
PFBS	ND	0.37	1.6	ng/l	1	03/10/24	
PFDA	ND	0.51	1.6	ng/l	1	03/10/24	
PFDoA	ND	0.52	1.6	ng/l	1	03/10/24	
PFEESA	ND	0.36	1.6	ng/l	1	03/10/24	
PFHpA	ND	0.52	1.6	ng/l	1	03/10/24	
PFHpS	ND	0.48	1.6	ng/l	1	03/10/24	
PFHxA	ND	0.57	1.6	ng/l	1	03/10/24	
PFHxS	ND	0.79	1.6	ng/l	1	03/10/24	
PFMBA	ND	0.49	1.6	ng/l	1	03/10/24	
PFMPA	ND	0.33	1.6	ng/l	1	03/10/24	
PFNA	ND	0.70	1.6	ng/l	1	03/10/24	
PFOA	ND	0.73	1.6	ng/l	1	03/10/24	
PFOS	ND	0.54	1.6	ng/l	1	03/10/24	
PFPeA	ND	0.36	1.6	ng/l	1	03/10/24	
PFPeS	ND	0.40	1.6	ng/l	1	03/10/24	
PFUnA	ND	0.47	1.6	ng/l	1	03/10/24	

Surrogate(s)

13C2-4:2 FTS	100%	Conc: 31.7	50-200	03/10/24
13C2-6:2 FTS	101%	Conc: 31.9	50-200	03/10/24
13C2-8:2 FTS	100%	Conc: 31.6	50-200	03/10/24
13C2-PFDoA	104%	Conc: 8.23	50-200	03/10/24
13C3-PFBS	117%	Conc: 9.32	50-200	03/10/24
13C3-PFHxS	106%	Conc: 8.45	50-200	03/10/24
13C4-PFBA	113%	Conc: 8.99	50-200	03/10/24
13C4-PFHpA	104%	Conc: 8.23	50-200	03/10/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

(Continued)

Sample Results

Sample: Field Blank

Sampled: 02/16/24 19:40 by Client

4B20063-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0509		Preparation: EPA 533/SPE		Prepared: 03/07/24 09:21		Analyst: ajc	
13C5-PFHxA	107%	Conc: 8.51	50-200			03/10/24	
13C5-PFPeA	111%	Conc: 8.79	50-200			03/10/24	
13C6-PFDA	107%	Conc: 8.50	50-200			03/10/24	
13C7-PFUnA	104%	Conc: 8.21	50-200			03/10/24	
13C8-PFOA	106%	Conc: 8.41	50-200			03/10/24	
13C8-PFOS	114%	Conc: 9.05	50-200			03/10/24	
13C9-PFNA	104%	Conc: 8.26	50-200			03/10/24	
HFPO-DA-13C3	110%	Conc: 8.71	50-200			03/10/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/17/24 11:32 by Client

4B20063-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0369

Preparation: EPA 533/SPE

Prepared: 03/06/24 08:48

Analyst: ajc

11CI-PF3OUdS	ND	0.70	1.6	ng/l	1	03/09/24	
4:2 FTS	ND	0.66	1.6	ng/l	1	03/09/24	
6:2 FTS	ND	0.62	1.6	ng/l	1	03/09/24	
8:2 FTS	ND	0.53	1.6	ng/l	1	03/09/24	
9CI-PF3ONS	ND	0.66	1.6	ng/l	1	03/09/24	
ADONA	ND	0.56	1.6	ng/l	1	03/09/24	
HFPO-DA	ND	0.73	1.6	ng/l	1	03/09/24	
NFDHA	ND	0.59	1.6	ng/l	1	03/09/24	
PFBA	ND	0.48	1.6	ng/l	1	03/09/24	
PFBS	ND	0.36	1.6	ng/l	1	03/09/24	
PFDA	ND	0.51	1.6	ng/l	1	03/09/24	
PFDoA	ND	0.51	1.6	ng/l	1	03/09/24	
PFEESA	ND	0.35	1.6	ng/l	1	03/09/24	
PFHpA	ND	0.51	1.6	ng/l	1	03/09/24	
PFHpS	ND	0.47	1.6	ng/l	1	03/09/24	
PFHxA	ND	0.57	1.6	ng/l	1	03/09/24	
PFHxS	ND	0.78	1.6	ng/l	1	03/09/24	
PFMBA	ND	0.49	1.6	ng/l	1	03/09/24	
PFMPA	ND	0.33	1.6	ng/l	1	03/09/24	
PFNA	ND	0.69	1.6	ng/l	1	03/09/24	
PFOA	ND	0.73	1.6	ng/l	1	03/09/24	
PFOS	ND	0.54	1.6	ng/l	1	03/09/24	
PFPeA	ND	0.35	1.6	ng/l	1	03/09/24	
PFPeS	ND	0.39	1.6	ng/l	1	03/09/24	
PFUnA	ND	0.47	1.6	ng/l	1	03/09/24	

Surrogate(s)

13C2-4:2 FTS	110%	Conc: 34.7	50-200	03/09/24
13C2-6:2 FTS	102%	Conc: 32.1	50-200	03/09/24
13C2-8:2 FTS	106%	Conc: 33.6	50-200	03/09/24
13C2-PFDoA	111%	Conc: 8.76	50-200	03/09/24
13C3-PFBS	109%	Conc: 8.63	50-200	03/09/24
13C3-PFHxS	118%	Conc: 9.29	50-200	03/09/24
13C4-PFBA	115%	Conc: 9.08	50-200	03/09/24
13C4-PFHpA	112%	Conc: 8.81	50-200	03/09/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/17/24 11:32 by Client

4B20063-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0369		Preparation: EPA 533/SPE		Prepared: 03/06/24 08:48		Analyst: ajc	
13C5-PFHxA	110%	Conc: 8.64	50-200			03/09/24	
13C5-PFPeA	115%	Conc: 9.03	50-200			03/09/24	
13C6-PFDA	113%	Conc: 8.92	50-200			03/09/24	
13C7-PFUnA	117%	Conc: 9.25	50-200			03/09/24	
13C8-PFOA	110%	Conc: 8.65	50-200			03/09/24	
13C8-PFOS	119%	Conc: 9.37	50-200			03/09/24	
13C9-PFNA	111%	Conc: 8.77	50-200			03/09/24	
HFPO-DA-13C3	103%	Conc: 8.13	50-200			03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/15/24 18:55 by Client

4B20063-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0369

Preparation: EPA 533/SPE

Prepared: 03/06/24 08:48

Analyst: ajc

11CI-PF3OUdS	ND	0.71	1.6	ng/l	1	03/09/24	
4:2 FTS	ND	0.66	1.6	ng/l	1	03/09/24	
6:2 FTS	ND	0.62	1.6	ng/l	1	03/09/24	
8:2 FTS	ND	0.54	1.6	ng/l	1	03/09/24	
9CI-PF3ONS	ND	0.67	1.6	ng/l	1	03/09/24	
ADONA	ND	0.57	1.6	ng/l	1	03/09/24	
HFPO-DA	ND	0.73	1.6	ng/l	1	03/09/24	
NFDHA	ND	0.59	1.6	ng/l	1	03/09/24	
PFBA	ND	0.49	1.6	ng/l	1	03/09/24	
PFBS	ND	0.37	1.6	ng/l	1	03/09/24	
PFDA	ND	0.51	1.6	ng/l	1	03/09/24	
PFDoA	ND	0.52	1.6	ng/l	1	03/09/24	
PFEESA	ND	0.36	1.6	ng/l	1	03/09/24	
PFHpA	ND	0.52	1.6	ng/l	1	03/09/24	
PFHpS	ND	0.48	1.6	ng/l	1	03/09/24	
PFHxA	ND	0.57	1.6	ng/l	1	03/09/24	
PFHxS	ND	0.79	1.6	ng/l	1	03/09/24	
PFMBA	ND	0.49	1.6	ng/l	1	03/09/24	
PFMPA	ND	0.33	1.6	ng/l	1	03/09/24	
PFNA	ND	0.70	1.6	ng/l	1	03/09/24	
PFOA	ND	0.73	1.6	ng/l	1	03/09/24	
PFOS	ND	0.54	1.6	ng/l	1	03/09/24	
PFPeA	ND	0.36	1.6	ng/l	1	03/09/24	
PFPeS	ND	0.40	1.6	ng/l	1	03/09/24	
PFUnA	ND	0.47	1.6	ng/l	1	03/09/24	

Surrogate(s)

13C2-4:2 FTS	111%	Conc: 35.3	50-200	03/09/24
13C2-6:2 FTS	108%	Conc: 34.4	50-200	03/09/24
13C2-8:2 FTS	111%	Conc: 35.4	50-200	03/09/24
13C2-PFDoA	112%	Conc: 8.89	50-200	03/09/24
13C3-PFBS	121%	Conc: 9.65	50-200	03/09/24
13C3-PFHxS	116%	Conc: 9.25	50-200	03/09/24
13C4-PFBA	111%	Conc: 8.87	50-200	03/09/24
13C4-PFHpA	107%	Conc: 8.50	50-200	03/09/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/15/24 18:55 by Client

4B20063-05 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0369		Preparation: EPA 533/SPE		Prepared: 03/06/24 08:48		Analyst: ajc	
13C5-PFHxA	107%	Conc: 8.52	50-200			03/09/24	
13C5-PFPeA	113%	Conc: 9.00	50-200			03/09/24	
13C6-PFDA	109%	Conc: 8.71	50-200			03/09/24	
13C7-PFUnA	111%	Conc: 8.80	50-200			03/09/24	
13C8-PFOA	107%	Conc: 8.51	50-200			03/09/24	
13C8-PFOS	119%	Conc: 9.45	50-200			03/09/24	
13C9-PFNA	108%	Conc: 8.61	50-200			03/09/24	
HFPO-DA-13C3	105%	Conc: 8.38	50-200			03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/15/24 18:55 by Client

4B20063-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Aldehydes and Carbonyl Compounds by GC/ECD

Method: EPA 556				Instr: GC08			
Batch ID: W4B1809	Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08		
Formaldehyde	10	0.86	2.0	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
2,4,5-TFAP	103%	Conc: 20.8	70-130			03/02/24	

Glycols by GC/FID

Method: EPA 8015B				Instr: GC09			
Batch ID: W4B1920	Preparation: _NONE (SVOC)		Prepared: 02/22/24 16:00		Analyst: alf		
Ethylene glycol	ND	4.7	10	mg/l	1	02/22/24	
<i>Surrogate(s)</i>							
1-Propanol	110%	Conc: 110	50-150			02/22/24	

Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533				Instr: LCMS06			
Batch ID: W4C0369	Preparation: EPA 533/SPE		Prepared: 03/06/24 08:48		Analyst: ajc		
11CI-PF3OUdS	ND	0.89	2.0	ng/l	1	03/09/24	
4:2 FTS	ND	0.83	2.0	ng/l	1	03/09/24	
6:2 FTS	ND	0.78	2.0	ng/l	1	03/09/24	
8:2 FTS	ND	0.68	2.0	ng/l	1	03/09/24	
9CI-PF3ONS	ND	0.84	2.0	ng/l	1	03/09/24	
ADONA	ND	0.71	2.0	ng/l	1	03/09/24	
HFPO-DA	ND	0.92	2.0	ng/l	1	03/09/24	
NFDHA	ND	0.75	2.0	ng/l	1	03/09/24	
PFBA	ND	0.61	2.0	ng/l	1	03/09/24	
PFBS	ND	0.46	2.0	ng/l	1	03/09/24	
PFDA	ND	0.64	2.0	ng/l	1	03/09/24	
PFDoA	ND	0.65	2.0	ng/l	1	03/09/24	
PFEESA	ND	0.45	2.0	ng/l	1	03/09/24	
PFHpA	ND	0.65	2.0	ng/l	1	03/09/24	
PFHpS	ND	0.60	2.0	ng/l	1	03/09/24	
PFHxA	ND	0.72	2.0	ng/l	1	03/09/24	
PFHxS	ND	0.99	2.0	ng/l	1	03/09/24	
PFMBA	ND	0.62	2.0	ng/l	1	03/09/24	
PFMPA	ND	0.42	2.0	ng/l	1	03/09/24	
PFNA	ND	0.88	2.0	ng/l	1	03/09/24	
PFOA	ND	0.92	2.0	ng/l	1	03/09/24	
PFOS	ND	0.68	2.0	ng/l	1	03/09/24	
PFPeA	ND	0.45	2.0	ng/l	1	03/09/24	

4B20063

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/15/24 18:55 by Client

4B20063-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0369

Preparation: EPA 533/SPE

Prepared: 03/06/24 08:48

Analyst: ajc

PFPeS	ND	0.50	2.0	ng/l	1	03/09/24	
PFUnA	ND	0.59	2.0	ng/l	1	03/09/24	

Surrogate(s)

13C2-4:2 FTS	95%	Conc: 34.9	50-200			03/09/24	
13C2-6:2 FTS	92%	Conc: 33.8	50-200			03/09/24	
13C2-8:2 FTS	96%	Conc: 35.0	50-200			03/09/24	
13C2-PFDoA	89%	Conc: 8.12	50-200			03/09/24	
13C3-PFBS	104%	Conc: 9.56	50-200			03/09/24	
13C3-PFHxS	105%	Conc: 9.58	50-200			03/09/24	
13C4-PFBA	84%	Conc: 7.74	50-200			03/09/24	
13C4-PFHpA	74%	Conc: 6.75	50-200			03/09/24	
13C5-PFHxA	75%	Conc: 6.86	50-200			03/09/24	
13C5-PFPeA	83%	Conc: 7.60	50-200			03/09/24	
13C6-PFDA	77%	Conc: 7.08	50-200			03/09/24	
13C7-PFUnA	89%	Conc: 8.11	50-200			03/09/24	
13C8-PFOA	77%	Conc: 7.02	50-200			03/09/24	
13C8-PFOS	106%	Conc: 9.71	50-200			03/09/24	
13C9-PFNA	77%	Conc: 7.01	50-200			03/09/24	
HFPO-DA-13C3	76%	Conc: 6.94	50-200			03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-1-S22

Sampled: 02/16/24 19:40 by Client

4B20063-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Explosives by EPA Method 8330							
Method: EPA 8330A				Instr: LC10			
Batch ID: W4B1813		Preparation: Method (SPE)		Prepared: 02/23/24 08:46		Analyst: cam	
1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l	1	03/13/24	
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l	1	03/13/24	
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l	1	03/13/24	
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l	1	03/13/24	
2-Nitrotoluene	ND	0.21	1.0	ug/l	1	03/13/24	
3-Nitrotoluene	ND	0.37	1.0	ug/l	1	03/13/24	
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l	1	03/13/24	
4-Nitrotoluene	ND	0.27	1.0	ug/l	1	03/13/24	
HMX	ND	0.30	1.0	ug/l	1	03/13/24	
Nitrobenzene	ND	0.16	1.0	ug/l	1	03/13/24	
RDX	ND	0.33	1.0	ug/l	1	03/13/24	
Tetryl	ND	0.45	1.0	ug/l	1	03/13/24	

Nitrosamines by CI GC/MS/MS, EPA 521

Method: EPA 521				Instr: GCMS09			
Batch ID: W4B2291		Preparation: EPA 521/SPE		Prepared: 02/28/24 08:04		Analyst: mld	
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l	1	03/01/24	
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l	1	03/01/24	
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l	1	03/01/24	
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l	1	03/01/24	
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l	1	03/01/24	
N-Nitrosomorpholine	ND	0.68	2.0	ng/l	1	03/01/24	
N-Nitrosopiperidine	ND	0.65	2.0	ng/l	1	03/01/24	
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l	1	03/01/24	

Surrogate(s)

NDMA-d6 115% Conc: 29.4 70-130 03/01/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/13/24 15:25 by Client

4B20063-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0369

Preparation: EPA 533/SPE

Prepared: 03/06/24 08:48

Analyst: ajc

11CI-PF3OUdS	ND	0.71	1.6	ng/l	1	03/09/24	
4:2 FTS	ND	0.66	1.6	ng/l	1	03/09/24	
6:2 FTS	ND	0.62	1.6	ng/l	1	03/09/24	
8:2 FTS	ND	0.54	1.6	ng/l	1	03/09/24	
9CI-PF3ONS	ND	0.67	1.6	ng/l	1	03/09/24	
ADONA	ND	0.57	1.6	ng/l	1	03/09/24	
HFPO-DA	ND	0.73	1.6	ng/l	1	03/09/24	
NFDHA	ND	0.60	1.6	ng/l	1	03/09/24	
PFBA	ND	0.49	1.6	ng/l	1	03/09/24	
PFBS	ND	0.37	1.6	ng/l	1	03/09/24	
PFDA	ND	0.51	1.6	ng/l	1	03/09/24	
PFDoA	ND	0.52	1.6	ng/l	1	03/09/24	
PFEESA	ND	0.36	1.6	ng/l	1	03/09/24	
PFHpA	ND	0.52	1.6	ng/l	1	03/09/24	
PFHpS	ND	0.48	1.6	ng/l	1	03/09/24	
PFHxA	ND	0.58	1.6	ng/l	1	03/09/24	
PFHxS	ND	0.79	1.6	ng/l	1	03/09/24	
PFMBA	ND	0.50	1.6	ng/l	1	03/09/24	
PFMPA	ND	0.34	1.6	ng/l	1	03/09/24	
PFNA	ND	0.70	1.6	ng/l	1	03/09/24	
PFOA	ND	0.73	1.6	ng/l	1	03/09/24	
PFOS	ND	0.54	1.6	ng/l	1	03/09/24	
PFPeA	ND	0.36	1.6	ng/l	1	03/09/24	
PFPeS	ND	0.40	1.6	ng/l	1	03/09/24	
PFUnA	ND	0.47	1.6	ng/l	1	03/09/24	

Surrogate(s)

13C2-4:2 FTS	104%	Conc: 33.2	50-200	03/09/24
13C2-6:2 FTS	96%	Conc: 30.7	50-200	03/09/24
13C2-8:2 FTS	101%	Conc: 32.2	50-200	03/09/24
13C2-PFDoA	106%	Conc: 8.45	50-200	03/09/24
13C3-PFBS	112%	Conc: 8.92	50-200	03/09/24
13C3-PFHxS	110%	Conc: 8.80	50-200	03/09/24
13C4-PFBA	102%	Conc: 8.16	50-200	03/09/24
13C4-PFHpA	103%	Conc: 8.20	50-200	03/09/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: Field Blank

Sampled: 02/13/24 15:25 by Client

4B20063-08 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0369		Preparation: EPA 533/SPE		Prepared: 03/06/24 08:48		Analyst: ajc	
13C5-PFHxA	100%	Conc: 7.97	50-200			03/09/24	
13C5-PFPeA	99%	Conc: 7.93	50-200			03/09/24	
13C6-PFDA	106%	Conc: 8.44	50-200			03/09/24	
13C7-PFUnA	109%	Conc: 8.68	50-200			03/09/24	
13C8-PFOA	103%	Conc: 8.19	50-200			03/09/24	
13C8-PFOS	111%	Conc: 8.84	50-200			03/09/24	
13C9-PFNA	106%	Conc: 8.45	50-200			03/09/24	
HFPO-DA-13C3	98%	Conc: 7.79	50-200			03/09/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-2-S22

Sampled: 02/13/24 19:25 by Client

4B20063-09 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Aldehydes and Carbonyl Compounds by GC/ECD							
Method: EPA 556			Instr: GC08				
Batch ID: W4B1809		Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08	
Formaldehyde	8.7	0.86	2.0	ug/l	1	03/02/24	O-05
<i>Surrogate(s)</i>							
2,4,5-TFAP	82%	Conc: 18.7	70-130			03/02/24	
Glycols by GC/FID							
Method: EPA 8015B			Instr: GC09				
Batch ID: W4B1449		Preparation: _NONE (SVOC)		Prepared: 02/20/24 15:24		Analyst: alf	
Ethylene glycol	ND	4.7	10	mg/l	1	02/20/24	
<i>Surrogate(s)</i>							
1-Propanol	81%	Conc: 81.0	50-150			02/20/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0369		Preparation: EPA 533/SPE		Prepared: 03/06/24 08:48		Analyst: ajc	
11CI-PF3OUdS	ND	0.89	2.0	ng/l	1	03/09/24	
4:2 FTS	ND	0.83	2.0	ng/l	1	03/09/24	
6:2 FTS	ND	0.78	2.0	ng/l	1	03/09/24	
8:2 FTS	ND	0.68	2.0	ng/l	1	03/09/24	
9CI-PF3ONS	ND	0.84	2.0	ng/l	1	03/09/24	
ADONA	ND	0.71	2.0	ng/l	1	03/09/24	
HFPO-DA	ND	0.92	2.0	ng/l	1	03/09/24	
NFDHA	ND	0.75	2.0	ng/l	1	03/09/24	
PFBA	ND	0.61	2.0	ng/l	1	03/09/24	
PFBS	ND	0.46	2.0	ng/l	1	03/09/24	
PFDA	ND	0.64	2.0	ng/l	1	03/09/24	
PFDoA	ND	0.65	2.0	ng/l	1	03/09/24	
PFEESA	ND	0.45	2.0	ng/l	1	03/09/24	
PFHpA	ND	0.65	2.0	ng/l	1	03/09/24	
PFHpS	ND	0.60	2.0	ng/l	1	03/09/24	
PFHxA	ND	0.72	2.0	ng/l	1	03/09/24	
PFHxS	ND	0.99	2.0	ng/l	1	03/09/24	
PFMBA	ND	0.62	2.0	ng/l	1	03/09/24	
PFMPA	ND	0.42	2.0	ng/l	1	03/09/24	
PFNA	ND	0.88	2.0	ng/l	1	03/09/24	
PFOA	ND	0.92	2.0	ng/l	1	03/09/24	
PFOS	ND	0.68	2.0	ng/l	1	03/09/24	
PFPeA	ND	0.45	2.0	ng/l	1	03/09/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-2-S22

Sampled: 02/13/24 19:25 by Client

4B20063-09 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0369

Preparation: EPA 533/SPE

Prepared: 03/06/24 08:48

Analyst: ajc

PFPeS	ND	0.50	2.0	ng/l	1	03/09/24	
PFUnA	ND	0.59	2.0	ng/l	1	03/09/24	

Surrogate(s)

13C2-4:2 FTS	98%	Conc: 39.8	50-200			03/09/24	
13C2-6:2 FTS	90%	Conc: 36.8	50-200			03/09/24	
13C2-8:2 FTS	92%	Conc: 37.6	50-200			03/09/24	
13C2-PFDoA	88%	Conc: 9.03	50-200			03/09/24	
13C3-PFBS	103%	Conc: 10.6	50-200			03/09/24	
13C3-PFHxS	108%	Conc: 11.0	50-200			03/09/24	
13C4-PFBA	93%	Conc: 9.47	50-200			03/09/24	
13C4-PFHpA	85%	Conc: 8.67	50-200			03/09/24	
13C5-PFHxA	86%	Conc: 8.80	50-200			03/09/24	
13C5-PFPeA	89%	Conc: 9.05	50-200			03/09/24	
13C6-PFDA	85%	Conc: 8.63	50-200			03/09/24	
13C7-PFUnA	89%	Conc: 9.05	50-200			03/09/24	
13C8-PFOA	81%	Conc: 8.30	50-200			03/09/24	
13C8-PFOS	108%	Conc: 11.1	50-200			03/09/24	
13C9-PFNA	85%	Conc: 8.65	50-200			03/09/24	
HFPO-DA-13C3	82%	Conc: 8.34	50-200			03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-2-S22

Sampled: 02/17/24 14:30 by Client

4B20063-10 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Explosives by EPA Method 8330

Method: EPA 8330A

Instr: LC10

Batch ID: W4B1813

Preparation: Method (SPE)

Prepared: 02/23/24 08:46

Analyst: cam

1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l	1	03/13/24	
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l	1	03/13/24	
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l	1	03/13/24	
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l	1	03/13/24	
2-Nitrotoluene	ND	0.21	1.0	ug/l	1	03/13/24	
3-Nitrotoluene	ND	0.37	1.0	ug/l	1	03/13/24	
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l	1	03/13/24	
4-Nitrotoluene	ND	0.27	1.0	ug/l	1	03/13/24	
HMX	ND	0.30	1.0	ug/l	1	03/13/24	
Nitrobenzene	ND	0.16	1.0	ug/l	1	03/13/24	
RDX	ND	0.33	1.0	ug/l	1	03/13/24	
Tetryl	ND	0.45	1.0	ug/l	1	03/13/24	

Nitrosamines by CI GC/MS/MS, EPA 521

Method: EPA 521

Instr: GCMS09

Batch ID: W4B2292

Preparation: EPA 521/SPE

Prepared: 02/28/24 08:07

Analyst: mld

N-Nitrosodiethylamine	ND	0.66	2.0	ng/l	1	03/05/24	
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l	1	03/05/24	
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l	1	03/05/24	
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l	1	03/05/24	
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l	1	03/05/24	
N-Nitrosomorpholine	ND	0.68	2.0	ng/l	1	03/05/24	
N-Nitrosopiperidine	ND	0.65	2.0	ng/l	1	03/05/24	
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l	1	03/05/24	

Surrogate(s)

NDMA-d6	99%	Conc: 24.9	70-130			03/05/24	
---------	-----	------------	--------	--	--	----------	--

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:44

Project Manager: Brown & Caldwell

Sample Results GEL Laboratories, LLC

Sample: AT-RES-6-S22
4B20063-01 (Water)

Sampled: 02/17/24 11:32 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 903.1							
Method: EPA 903.1	Batch ID: 2575902		Prepared: 03/19/24 00:00			Analyst: MJ2	
Radium-226	0.0941			pCi/L	1	03/19/24	U
Uncertainty: 0.142	MDA: 0.252						

EPA 904.0/ EPA 9320							
Method: EPA 904.0/ EPA 9320	Batch ID: 2575966		Prepared: 03/19/24 00:00			Analyst: JE1	
Radium-228	0.376			pCi/L	1	03/19/24	U
Uncertainty: 0.358	MDA: 0.585						
<i>Surrogate(s)</i>							
<i>Barium Carrier</i>	97.3%		25-125			03/19/24	
<i>Yttrium Carrier</i>	58.3%		25-125			03/19/24	

EPA 905.0							
Method: EPA 905.0	Batch ID: 2573130		Prepared: 02/29/24 00:00			Analyst: ST2	
Strontium-90	0.258			pCi/L	1	02/29/24	U
Uncertainty: 0.963	MDA: 1.73						
<i>Surrogate(s)</i>							
<i>Strontium Carrier</i>	87.3%		25-125			02/29/24	

EPA 906.0							
Method: EPA 906.0	Batch ID: 2573168		Prepared: 03/07/24 00:00			Analyst: HB2	
Tritium	165			pCi/L	1	03/07/24	U
Uncertainty: 364	MDA: 625						

Sample Results LA Testing - EMSL Analytical, Inc. CA-ELAP #2283, Non-NELAP

Sample: AT-RES-6-S22
4B20063-01 (Water)

Sampled: 02/17/24 11:32 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 100.2							
Method: EPA 100.2	Batch ID: 322404493		Prepared: 02/23/24 11:20			Analyst: _SUB	
Asbestos	ND		0.20	MFL	1	03/07/24	
Fibers:	Area: 0.064	Confidence: 0.00-0.74					

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

EPA 903.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2575902 - EPA 903.1										
Blank (1205664148-BLK)										
Radium-226	0.0504	1.00	pCi/L				-			U
Uncertainty: 0.140		MDA: 0.279								
Duplicate (1205664149 D)										
Source: 657400001			Prepared & Analyzed: 03/19/24							
Radium-226	0.0650	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.0919		MDA: 0.152								
Matrix Spike (1205664150 S)										
Source: 657400001			Prepared & Analyzed: 03/19/24							
Radium-226	12.1	1.00	pCi/L	14.4	<	84.2	80-120			
Uncertainty: 1.03		MDA: 0.196								
BS (1205664151-BKS)										
Source: 657400001			Prepared & Analyzed: 03/19/24							
Radium-226	14.9	1.00	pCi/L	14.4		104	90-110			
Uncertainty: 1.43		MDA: 0.249								

Quality Control Results

EPA 904.0/ EPA 9320

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2575966 - EPA 904.0/ EPA 9320										
Blank (1205664358-BLK)										
Radium-228	-0.0154	1.00	pCi/L				-			U
Uncertainty: 0.383		MDA: 0.713								
Duplicate (1205664359 D)										
Source: 657401001			Prepared & Analyzed: 03/19/24							
Radium-228	0.172	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.263		MDA: 0.460								
Matrix Spike (1205664360 S)										
Source: 657401001			Prepared & Analyzed: 03/19/24							
Radium-228	11.8	1.00	pCi/L	16.8	<	70.2	70-130			
Uncertainty: 1.18		MDA: 0.544								
BS (1205664361-BKS)										
Source: 657401001			Prepared & Analyzed: 03/19/24							
Radium-228	2.80	1.00	pCi/L	3.36		83.2	80-120			
Uncertainty: 0.726		MDA: 0.680								

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

EPA 905.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573130 - EPA 905.0										
Blank (1205659369-BLK)										
Strontium-90	0.527	2.00	pCi/L				-			U
Uncertainty: 0.935		MDA: 1.63		Prepared & Analyzed: 02/29/24						
Duplicate (1205659370 D)										
Strontium-90	-0.122	2.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.774		MDA: 1.54		Prepared & Analyzed: 02/29/24						
Matrix Spike (1205659371 S)										
Strontium-90	34.3	2.00	pCi/L	29.1	<	118	80-120			
Uncertainty: 3.39		MDA: 2.60		Prepared & Analyzed: 02/29/24						
BS (1205659372-BKS)										
Strontium-90	6.05	2.00	pCi/L	5.58		108	90-110			
Uncertainty: 1.53		MDA: 1.83		Prepared & Analyzed: 02/29/24						

Quality Control Results (Continued)

EPA 906.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573168 - EPA 906.0										
Blank (1205659461-BLK)										
Tritium	33.7	1000	pCi/L				-			U
Uncertainty: 355		MDA: 620		Prepared & Analyzed: 03/07/24						
Duplicate (1205659462 D)										
Tritium	33.2	1000	pCi/L		<		0-20	0	20	U
Uncertainty: 356		MDA: 623		Prepared & Analyzed: 03/07/24						
Matrix Spike (1205659463 S)										
Tritium	10500	1000	pCi/L	12000	<	87.8	80-120			
Uncertainty: 1310		MDA: 1540		Prepared & Analyzed: 03/07/24						
BS (1205659464-BKS)										
Tritium	4850	1000	pCi/L	4830		100	90-110			
Uncertainty: 623		MDA: 702		Prepared & Analyzed: 03/11/24						

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Aldehydes and Carbonyl Compounds by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1809 - EPA 556											
Blank (W4B1809-BLK1)											
Formaldehyde	ND	0.86	2.0	ug/l							
<i>Surrogate(s)</i>											
2,4,5-TFAP	21.5			ug/l	20.0		108	70-130			
LCS (W4B1809-BS1)											
Formaldehyde	15.0	0.86	2.0	ug/l	20.0		75	70-130			
<i>Surrogate(s)</i>											
2,4,5-TFAP	23.3			ug/l	20.0		117	70-130			
LCS Dup (W4B1809-BSD1)											
Formaldehyde	15.7	0.86	2.0	ug/l	20.0		78	70-130	4	30	
<i>Surrogate(s)</i>											
2,4,5-TFAP	21.6			ug/l	20.0		108	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2										
Blank (W4B2044-BLK1)					Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l						
Aldicarb	ND	0.58	2.0	ug/l						
Aldicarb sulfone	ND	0.73	2.0	ug/l						
Aldicarb sulfoxide	ND	1.0	2.0	ug/l						
Carbaryl	ND	1.0	2.0	ug/l						
Carbofuran	ND	1.0	2.0	ug/l						
Methiocarb	ND	1.0	2.0	ug/l						
Methomyl	ND	1.3	2.0	ug/l						
Oxamyl	ND	1.1	2.0	ug/l						
Propoxur (Baygon)	ND	1.4	2.0	ug/l						
<i>Surrogate(s)</i>										
BDMC	10.6			ug/l	10.0		106 70-130			
LCS (W4B2044-BS1)					Prepared: 02/25/24 Analyzed: 02/26/24					
3-Hydroxycarbofuran	11.0	0.82	2.0	ug/l	10.0		110 70-130			
Aldicarb	10.8	0.58	2.0	ug/l	10.0		108 70-130			
Aldicarb sulfone	8.12	0.73	2.0	ug/l	10.0		81 70-130			
Aldicarb sulfoxide	11.3	1.0	2.0	ug/l	10.0		113 70-130			
Carbaryl	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Carbofuran	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Methiocarb	12.6	1.0	2.0	ug/l	10.0		126 70-130			
Methomyl	9.30	1.3	2.0	ug/l	10.0		93 70-130			
Oxamyl	8.16	1.1	2.0	ug/l	10.0		82 70-130			
Propoxur (Baygon)	11.6	1.4	2.0	ug/l	10.0		116 70-130			
<i>Surrogate(s)</i>										
BDMC	12.6			ug/l	10.0		126 70-130			
Matrix Spike (W4B2044-MS1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.5	0.82	2.0	ug/l	10.0	ND	125 70-130			
Aldicarb	12.9	0.58	2.0	ug/l	10.0	ND	129 70-130			
Aldicarb sulfone	9.57	0.73	2.0	ug/l	10.0	ND	96 70-130			
Aldicarb sulfoxide	12.2	1.0	2.0	ug/l	10.0	ND	122 70-130			
Carbaryl	12.4	1.0	2.0	ug/l	10.0	ND	124 70-130			
Carbofuran	11.0	1.0	2.0	ug/l	10.0	ND	110 70-130			
Methiocarb	13.0	1.0	2.0	ug/l	10.0	ND	130 70-130			
Methomyl	10.8	1.3	2.0	ug/l	10.0	ND	108 70-130			
Oxamyl	10.8	1.1	2.0	ug/l	10.0	ND	108 70-130			
Propoxur (Baygon)	12.1	1.4	2.0	ug/l	10.0	ND	121 70-130			
<i>Surrogate(s)</i>										
BDMC	11.8			ug/l	10.0		118 70-130			
Matrix Spike Dup (W4B2044-MSD1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.1	0.82	2.0	ug/l	10.0	ND	121 70-130	3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Carbamates and Urea Pesticides (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2 (Continued)											
Matrix Spike Dup (W4B2044-MSD1)			Source: 3L04005-04			Prepared & Analyzed: 02/25/24					
Aldicarb	11.8	0.58	2.0	ug/l	10.0	ND	118	70-130	9	30	
Aldicarb sulfone	9.24	0.73	2.0	ug/l	10.0	ND	92	70-130	4	30	
Aldicarb sulfoxide	14.0	1.0	2.0	ug/l	10.0	ND	140	70-130	13	30	MS-01
Carbaryl	11.4	1.0	2.0	ug/l	10.0	ND	114	70-130	8	30	
Carbofuran	11.6	1.0	2.0	ug/l	10.0	ND	116	70-130	5	30	
Methiocarb	12.3	1.0	2.0	ug/l	10.0	ND	123	70-130	5	30	
Methomyl	10.7	1.3	2.0	ug/l	10.0	ND	107	70-130	1	30	
Oxamyl	10.6	1.1	2.0	ug/l	10.0	ND	106	70-130	2	30	
Propoxur (Baygon)	12.2	1.4	2.0	ug/l	10.0	ND	122	70-130	1	30	
<i>Surrogate(s)</i>											
BDMC	12.7			ug/l	10.0		127	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2149 - EPA 515.4											
Blank (W4B2149-BLK1)						Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	ND	0.065	0.20	ug/l							
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l							
2,4-D	ND	0.14	0.40	ug/l							
2,4-DB	0.233	0.19	2.0	ug/l							B-02, J
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l							
Acifluorfen	ND	0.030	0.40	ug/l							
Bentazon	ND	0.23	2.0	ug/l							
Dalapon	ND	0.11	0.40	ug/l							
DCPA	0.0458	0.029	0.10	ug/l							B-02, J
Dicamba	ND	0.15	0.60	ug/l							
Dichloroprop	ND	0.12	0.30	ug/l							
Dinoseb	ND	0.033	0.40	ug/l							
Pentachlorophenol	ND	0.014	0.20	ug/l							
Picloram	ND	0.050	0.60	ug/l							
<i>Surrogate(s)</i>											
2,4-DCAA	9.53			ug/l	10.0		95	70-130			
LCS (W4B2149-BS1)						Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	4.22	0.065	0.20	ug/l	4.00		106	70-130			
2,4,5-TP (Silvex)	4.19	0.026	0.20	ug/l	4.00		105	70-130			
2,4-D	8.44	0.14	0.40	ug/l	8.00		106	70-130			
2,4-DB	15.8	0.19	2.0	ug/l	16.0		99	70-130			
3,5-Dichlorobenzoic acid	8.45	0.12	1.0	ug/l	8.00		106	70-130			
Acifluorfen	4.15	0.030	0.40	ug/l	4.00		104	70-130			
Bentazon	16.2	0.23	2.0	ug/l	16.0		101	70-130			
Dalapon	8.26	0.11	0.40	ug/l	8.00		103	70-130			
DCPA	4.74	0.029	0.10	ug/l	4.00		119	70-130			
Dicamba	8.32	0.15	0.60	ug/l	8.00		104	70-130			
Dichloroprop	8.44	0.12	0.30	ug/l	8.00		105	70-130			
Dinoseb	4.25	0.033	0.40	ug/l	4.00		106	70-130			
Pentachlorophenol	4.24	0.014	0.20	ug/l	4.00		106	70-130			
Picloram	4.17	0.050	0.60	ug/l	4.00		104	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.5			ug/l	10.0		105	70-130			
Matrix Spike (W4B2149-MS1)			Source: 4B15126-01			Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	4.30	0.065	0.20	ug/l	4.00	ND	108	70-130			
2,4,5-TP (Silvex)	4.15	0.026	0.20	ug/l	4.00	ND	104	70-130			
2,4-D	8.41	0.14	0.40	ug/l	8.00	ND	105	70-130			
2,4-DB	16.5	0.19	2.0	ug/l	16.0	ND	103	70-130			
3,5-Dichlorobenzoic acid	8.22	0.12	1.0	ug/l	8.00	ND	103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2149 - EPA 515.4 (Continued)											
Matrix Spike (W4B2149-MS1) Source: 4B15126-01 Prepared: 02/27/24 Analyzed: 03/12/24											
Acifluorfen	4.22	0.030	0.40	ug/l	4.00	ND	105	70-130			
Bentazon	16.9	0.23	2.0	ug/l	16.0	ND	105	70-130			
Dalapon	8.38	0.11	0.40	ug/l	8.00	ND	105	70-130			
DCPA	5.25	0.029	0.10	ug/l	4.00	ND	131	70-130			MS-01
Dicamba	8.25	0.15	0.60	ug/l	8.00	ND	103	70-130			
Dichloroprop	8.27	0.12	0.30	ug/l	8.00	ND	103	70-130			
Dinoseb	4.18	0.033	0.40	ug/l	4.00	ND	105	70-130			
Pentachlorophenol	4.17	0.014	0.20	ug/l	4.00	ND	104	70-130			
Picloram	4.33	0.050	0.60	ug/l	4.00	ND	108	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.3			ug/l	10.0		103	70-130			
Matrix Spike Dup (W4B2149-MSD1) Source: 4B15126-01 Prepared: 02/27/24 Analyzed: 03/12/24											
2,4,5-T	4.24	0.065	0.20	ug/l	4.00	ND	106	70-130	1	30	
2,4,5-TP (Silvex)	4.24	0.026	0.20	ug/l	4.00	ND	106	70-130	2	30	
2,4-D	8.48	0.14	0.40	ug/l	8.00	ND	106	70-130	0.8	30	
2,4-DB	15.8	0.19	2.0	ug/l	16.0	ND	98	70-130	5	30	
3,5-Dichlorobenzoic acid	8.47	0.12	1.0	ug/l	8.00	ND	106	70-130	3	30	
Acifluorfen	4.21	0.030	0.40	ug/l	4.00	ND	105	70-130	0.2	30	
Bentazon	16.6	0.23	2.0	ug/l	16.0	ND	103	70-130	2	30	
Dalapon	8.27	0.11	0.40	ug/l	8.00	ND	103	70-130	1	30	
DCPA	5.35	0.029	0.10	ug/l	4.00	ND	134	70-130	2	30	MS-01
Dicamba	8.44	0.15	0.60	ug/l	8.00	ND	105	70-130	2	30	
Dichloroprop	8.44	0.12	0.30	ug/l	8.00	ND	105	70-130	2	30	
Dinoseb	4.20	0.033	0.40	ug/l	4.00	ND	105	70-130	0.5	30	
Pentachlorophenol	4.26	0.014	0.20	ug/l	4.00	ND	107	70-130	2	30	
Picloram	4.23	0.050	0.60	ug/l	4.00	ND	106	70-130	2	30	
<i>Surrogate(s)</i>											
2,4-DCAA	10.6			ug/l	10.0		106	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1									
Blank (W4B2423-BLK1)					Prepared: 02/29/24 Analyzed: 03/05/24				
4,4'-DDD	ND	0.0030	0.010	ug/l					
4,4'-DDE	ND	0.0040	0.010	ug/l					
4,4'-DDT	ND	0.0030	0.010	ug/l					
Aldrin	ND	0.0040	0.010	ug/l					
alpha-BHC	ND	0.0015	0.010	ug/l					
Aroclor 1016	ND	0.048	0.10	ug/l					
Aroclor 1221	ND	0.044	0.10	ug/l					
Aroclor 1232	ND	0.064	0.10	ug/l					
Aroclor 1242	ND	0.070	0.10	ug/l					
Aroclor 1248	ND	0.049	0.10	ug/l					
Aroclor 1254	ND	0.068	0.10	ug/l					
Aroclor 1260	ND	0.076	0.10	ug/l					
beta-BHC	ND	0.0045	0.010	ug/l					
Chlordane (tech)	ND	0.067	0.10	ug/l					
Chlorothalonil	ND	0.0040	0.050	ug/l					
delta-BHC	ND	0.0030	0.010	ug/l					
Dieldrin	ND	0.0030	0.010	ug/l					
Endosulfan I	ND	0.0030	0.010	ug/l					
Endosulfan II	ND	0.0019	0.010	ug/l					
Endosulfan sulfate	ND	0.0030	0.010	ug/l					
Endrin	ND	0.0030	0.010	ug/l					
Endrin aldehyde	ND	0.0040	0.010	ug/l					
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l					
Heptachlor	ND	0.0031	0.010	ug/l					
Heptachlor epoxide	ND	0.0019	0.010	ug/l					
Hexachlorobenzene	ND	0.0019	0.050	ug/l					
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l					
Methoxychlor	ND	0.0030	0.010	ug/l					
PCBs, Total	ND	0.048	0.50	ug/l					
Propachlor	ND	0.045	0.20	ug/l					
Toxaphene	ND	0.37	1.0	ug/l					
Trifluralin	ND	0.0043	0.010	ug/l					
<i>Surrogate(s)</i>									
4,4-Dibromobiphenyl	0.0981			ug/l	0.100		98 70-130		
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24				
4,4'-DDD	0.0759	0.0030	0.010	ug/l	0.100		76 70-130		
4,4'-DDE	0.0595	0.0040	0.010	ug/l	0.100		60 70-130		Q-02
4,4'-DDT	0.112	0.0030	0.010	ug/l	0.100		112 70-130		
Aldrin	0.0182	0.0040	0.010	ug/l	0.100		18 50-130		Q-02

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1 (Continued)										
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
alpha-BHC	0.0815	0.0015	0.010	ug/l	0.100		82 70-130			
beta-BHC	0.0856	0.0045	0.010	ug/l	0.100		86 70-130			
delta-BHC	0.0950	0.0030	0.010	ug/l	0.100		95 70-130			
Dieldrin	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
Endosulfan I	0.0679	0.0030	0.010	ug/l	0.100		68 70-130			BS-04
Endosulfan II	0.0729	0.0019	0.010	ug/l	0.100		73 70-130			
Endosulfan sulfate	0.0617	0.0030	0.010	ug/l	0.100		62 70-130			BS-04
Endrin	0.0936	0.0030	0.010	ug/l	0.100		94 70-130			
Endrin aldehyde	0.0464	0.0040	0.010	ug/l	0.100		46 70-130			Q-02
gamma-BHC (Lindane)	0.0843	0.0030	0.010	ug/l	0.100		84 70-130			
Heptachlor	0.0785	0.0031	0.010	ug/l	0.100		78 70-130			
Heptachlor epoxide	0.0847	0.0019	0.010	ug/l	0.100		85 70-130			
Methoxychlor	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0697			ug/l	0.100		70 70-130			
LCS (W4B2423-BS2)					Prepared: 02/29/24 Analyzed: 03/05/24					
Aroclor 1016	0.901	0.048	0.10	ug/l	1.00		90 70-130			
Aroclor 1260	0.620	0.076	0.10	ug/l	1.00		62 70-130			Q-02
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0795			ug/l	0.100		79 70-130			
LCS Dup (W4B2423-BSD1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	0.0889	0.0030	0.010	ug/l	0.100		89 70-130	16	30	
4,4'-DDE	0.0670	0.0040	0.010	ug/l	0.100		67 70-130	12	30	Q-02
4,4'-DDT	0.130	0.0030	0.010	ug/l	0.100		130 70-130	14	30	
Aldrin	0.0208	0.0040	0.010	ug/l	0.100		21 50-130	13	30	Q-02
alpha-BHC	0.0961	0.0015	0.010	ug/l	0.100		96 70-130	16	30	
beta-BHC	0.101	0.0045	0.010	ug/l	0.100		101 70-130	17	30	
delta-BHC	0.111	0.0030	0.010	ug/l	0.100		111 70-130	16	30	
Dieldrin	0.0902	0.0030	0.010	ug/l	0.100		90 70-130	17	30	
Endosulfan I	0.0798	0.0030	0.010	ug/l	0.100		80 70-130	16	30	
Endosulfan II	0.0839	0.0019	0.010	ug/l	0.100		84 70-130	14	30	
Endosulfan sulfate	0.0748	0.0030	0.010	ug/l	0.100		75 70-130	19	30	
Endrin	0.107	0.0030	0.010	ug/l	0.100		107 70-130	13	30	
Endrin aldehyde	0.0465	0.0040	0.010	ug/l	0.100		46 70-130	0.3	30	Q-02
gamma-BHC (Lindane)	0.0987	0.0030	0.010	ug/l	0.100		99 70-130	16	30	
Heptachlor	0.0931	0.0031	0.010	ug/l	0.100		93 70-130	17	30	
Heptachlor epoxide	0.0991	0.0019	0.010	ug/l	0.100		99 70-130	16	30	
Methoxychlor	0.0944	0.0030	0.010	ug/l	0.100		94 70-130	21	30	
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0972			ug/l	0.100		97 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B2277 - EPA 335.4											
Blank (W4B2277-BLK1)											
Cyanide, Total	ND	1.5	5.0	ug/l							
LCS (W4B2277-BS1)											
Cyanide, Total	94.9	1.5	5.0	ug/l	100		95	90-110			
Matrix Spike (W4B2277-MS1)											
Cyanide, Total	212	1.5	5.0	ug/l	200	ND	106	90-110			
Matrix Spike Dup (W4B2277-MSD1)											
Cyanide, Total	218	1.5	5.0	ug/l	200	ND	109	90-110	3	20	

Quality Control Results

(Continued)

Diquat and Paraquat by EPA 549.2

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1814 - EPA 549.2											
Blank (W4B1814-BLK1)											
Diquat	ND	1.2	4.0	ug/l							
LCS (W4B1814-BS1)											
Diquat	20.1	1.2	4.0	ug/l	20.0		101	70-130			
Matrix Spike (W4B1814-MS1)											
Diquat	20.6	1.2	4.0	ug/l	20.0	ND	103	46-122			
Matrix Spike Dup (W4B1814-MSD1)											
Diquat	19.8	1.2	4.0	ug/l	20.0	ND	99	46-122	4	30	

Quality Control Results

(Continued)

Endothall By EPA 548.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1800 - EPA 548.1											
Blank (W4B1800-BLK1)											
Endothall	ND	11	45	ug/l							
LCS (W4B1800-BS1)											
Endothall	99.5	11	45	ug/l	100		99	80-120			
Matrix Spike (W4B1800-MS1)											
Endothall	37.1	22	90	ug/l	200	ND	19	0.1-109			J
Matrix Spike Dup (W4B1800-MSD1)											
Endothall	32.4	22	90	ug/l	200	ND	16	0.1-109	14	30	J

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Explosives by EPA Method 8330

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1813 - EPA 8330A										
Blank (W4B1813-BLK1)					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l						
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l						
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l						
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l						
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l						
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l						
2-Nitrotoluene	ND	0.21	1.0	ug/l						
3-Nitrotoluene	ND	0.37	1.0	ug/l						
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l						
4-Nitrotoluene	ND	0.27	1.0	ug/l						
HMX	ND	0.30	1.0	ug/l						
Nitrobenzene	ND	0.16	1.0	ug/l						
RDX	ND	0.33	1.0	ug/l						
Tetryl	ND	0.45	1.0	ug/l						
LCS (W4B1813-BS1)										
					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	2.83	0.31	1.0	ug/l	2.50	113	70-130			
1,3-Dinitrobenzene	2.69	0.15	1.0	ug/l	2.50	107	70-130			
2,4,6-Trinitrotoluene	2.93	0.34	1.0	ug/l	2.50	117	70-130			
2,4-Dinitrotoluene	2.56	0.34	1.0	ug/l	2.50	102	70-130			
2,6-Dinitrotoluene	2.52	0.20	1.0	ug/l	2.50	101	70-130			
2-Amino-4,6-Dinitrotoluene	2.62	0.35	1.0	ug/l	2.50	105	70-130			
2-Nitrotoluene	2.08	0.21	1.0	ug/l	2.50	83	70-130			
3-Nitrotoluene	2.04	0.37	1.0	ug/l	2.50	82	70-130			
4-Amino-2,6-Dinitrotoluene	2.83	0.17	1.0	ug/l	2.50	113	70-130			
4-Nitrotoluene	2.13	0.27	1.0	ug/l	2.50	85	70-130			
HMX	2.81	0.30	1.0	ug/l	2.50	112	70-130			
Nitrobenzene	2.28	0.16	1.0	ug/l	2.50	91	70-130			
RDX	2.86	0.33	1.0	ug/l	2.50	114	70-130			
Tetryl	2.50	0.45	1.0	ug/l	2.50	100	70-130			
LCS Dup (W4B1813-BSD1)										
					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	2.58	0.31	1.0	ug/l	2.50	103	70-130	9	25	
1,3-Dinitrobenzene	2.44	0.15	1.0	ug/l	2.50	98	70-130	10	25	
2,4,6-Trinitrotoluene	2.65	0.34	1.0	ug/l	2.50	106	70-130	10	25	
2,4-Dinitrotoluene	2.35	0.34	1.0	ug/l	2.50	94	70-130	9	25	
2,6-Dinitrotoluene	2.18	0.20	1.0	ug/l	2.50	87	70-130	14	25	
2-Amino-4,6-Dinitrotoluene	2.36	0.35	1.0	ug/l	2.50	94	70-130	11	25	
2-Nitrotoluene	1.88	0.21	1.0	ug/l	2.50	75	70-130	10	25	
3-Nitrotoluene	2.03	0.37	1.0	ug/l	2.50	81	70-130	0.4	25	
4-Amino-2,6-Dinitrotoluene	2.37	0.17	1.0	ug/l	2.50	95	70-130	18	25	



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Explosives by EPA Method 8330 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B1813 - EPA 8330A (Continued)											
LCS Dup (W4B1813-BSD1)											
					Prepared: 02/22/24 Analyzed: 03/13/24						
4-Nitrotoluene	1.80	0.27	1.0	ug/l	2.50	72	70-130	17	25		
HMX	2.48	0.30	1.0	ug/l	2.50	99	70-130	12	25		
Nitrobenzene	1.87	0.16	1.0	ug/l	2.50	75	70-130	19	25		
RDX	2.48	0.33	1.0	ug/l	2.50	99	70-130	14	25		
Tetryl	2.51	0.45	1.0	ug/l	2.50	100	70-130	0.4	25		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Glycols by GC/FID

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1449 - EPA 8015B										
Blank (W4B1449-BLK1) Prepared & Analyzed: 02/20/24										
Ethylene glycol	ND	4.7	10	mg/l						
<i>Surrogate(s)</i>										
1-Propanol	70.3			mg/l	100		70 50-150			
LCS (W4B1449-BS1) Prepared & Analyzed: 02/20/24										
Ethylene glycol	79.1	4.7	10	mg/l	100		79 70-130			
<i>Surrogate(s)</i>										
1-Propanol	69.3			mg/l	100		69 50-150			
Matrix Spike (W4B1449-MS1) Source: 4B16030-01 Prepared & Analyzed: 02/20/24										
Ethylene glycol	78.3	4.7	10	mg/l	100	ND	78 57-127			
<i>Surrogate(s)</i>										
1-Propanol	83.9			mg/l	100		84 50-150			
Matrix Spike Dup (W4B1449-MSD1) Source: 4B16030-01 Prepared & Analyzed: 02/20/24										
Ethylene glycol	85.5	4.7	10	mg/l	100	ND	85 57-127	9	25	
<i>Surrogate(s)</i>										
1-Propanol	63.9			mg/l	100		64 50-150			
Batch: W4B1920 - EPA 8015B										
Blank (W4B1920-BLK1) Prepared & Analyzed: 02/22/24										
Ethylene glycol	ND	4.7	10	mg/l						
<i>Surrogate(s)</i>										
1-Propanol	127			mg/l	100		127 50-150			
LCS (W4B1920-BS1) Prepared & Analyzed: 02/22/24										
Ethylene glycol	91.4	4.7	10	mg/l	100		91 70-130			
<i>Surrogate(s)</i>										
1-Propanol	93.1			mg/l	100		93 50-150			
Matrix Spike (W4B1920-MS1) Source: 4B20063-06 Prepared & Analyzed: 02/22/24										
Ethylene glycol	94.0	4.7	10	mg/l	100	ND	94 57-127			
<i>Surrogate(s)</i>										
1-Propanol	85.5			mg/l	100		85 50-150			
Matrix Spike Dup (W4B1920-MSD1) Source: 4B20063-06 Prepared & Analyzed: 02/22/24										
Ethylene glycol	88.8	4.7	10	mg/l	100	ND	89 57-127	6	25	
<i>Surrogate(s)</i>										
1-Propanol	95.6			mg/l	100		96 50-150			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Glyphosate by EPA 547

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2068 - EPA 547											
Blank (W4B2068-BLK1)											
Glyphosate	ND	1.8	5.0	ug/l	Prepared & Analyzed: 02/26/24						
LCS (W4B2068-BS1)											
Glyphosate	24.1	1.8	5.0	ug/l	25.0	96	70-130				
Matrix Spike (W4B2068-MS1)											
Source: 3L04005-04											
Glyphosate	26.5	1.8	5.0	ug/l	25.0	ND	106	41-149			
Matrix Spike (W4B2068-MS2)											
Source: 3L04005-05											
Glyphosate	30.0	1.8	5.0	ug/l	25.0	ND	120	41-149			
Matrix Spike Dup (W4B2068-MSD1)											
Source: 3L04005-04											
Glyphosate	24.9	1.8	5.0	ug/l	25.0	ND	100	41-149	6	30	
Matrix Spike Dup (W4B2068-MSD2)											
Source: 3L04005-05											
Glyphosate	28.5	1.8	5.0	ug/l	25.0	ND	114	41-149	5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Haloacetic Acids (HAAs) by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1637 - EPA 552.3											
Blank (W4B1637-BLK1)						Prepared: 02/21/24 Analyzed: 03/04/24					
Dibromoacetic acid (dbaa)	ND	0.28	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l							
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l							
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.4			ug/l	10.0		104	70-130			
LCS (W4B1637-BS1)						Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	10.7	0.28	1.0	ug/l	10.0		107	70-130			
Dichloroacetic acid (dcaa)	10.3	0.29	1.0	ug/l	10.0		103	70-130			
Monobromoacetic acid (mbaa)	10.0	0.34	1.0	ug/l	10.0		100	70-130			
Monochloroacetic acid (mcaa)	9.81	0.31	2.0	ug/l	10.0		98	70-130			
Trichloroacetic acid (tcaa)	10.5	0.29	1.0	ug/l	10.0		105	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.0			ug/l	10.0		100	70-130			
Matrix Spike (W4B1637-MS1)						Source: 4B02004-10 Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	11.3	0.28	1.0	ug/l	10.0	0.528	108	70-130			
Dichloroacetic acid (dcaa)	11.1	0.29	1.0	ug/l	10.0	0.607	105	70-130			
Monobromoacetic acid (mbaa)	10.2	0.34	1.0	ug/l	10.0	ND	102	70-130			
Monochloroacetic acid (mcaa)	10.0	0.31	2.0	ug/l	10.0	ND	100	70-130			
Trichloroacetic acid (tcaa)	9.87	0.29	1.0	ug/l	10.0	ND	99	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.1			ug/l	10.0		101	70-130			
Matrix Spike Dup (W4B1637-MSD1)						Source: 4B02004-10 Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	10.8	0.28	1.0	ug/l	10.0	0.528	103	70-130	4	30	
Dichloroacetic acid (dcaa)	10.6	0.29	1.0	ug/l	10.0	0.607	100	70-130	4	30	
Monobromoacetic acid (mbaa)	9.55	0.34	1.0	ug/l	10.0	ND	96	70-130	6	30	
Monochloroacetic acid (mcaa)	10.4	0.31	2.0	ug/l	10.0	ND	104	70-130	3	30	
Trichloroacetic acid (tcaa)	9.70	0.29	1.0	ug/l	10.0	ND	97	70-130	2	30	
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.5			ug/l	10.0		105	70-130			



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2303 - EPA 245.1											
Blank (W4B2303-BLK1)											
Mercury, Total	ND	0.037	0.050	ug/l							
LCS (W4B2303-BS1)											
Mercury, Total	0.969	0.037	0.050	ug/l	1.00		97	85-115			
Matrix Spike (W4B2303-MS1)											
						Source: 4B21109-04					
Mercury, Total	0.980	0.037	0.050	ug/l	1.00	ND	98	70-130			
Matrix Spike Dup (W4B2303-MSD1)											
						Source: 4B21109-04					
Mercury, Total	0.963	0.037	0.050	ug/l	1.00	ND	96	70-130	2	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Nitrosamines by CI GC/MS/MS, EPA 521

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2291 - EPA 521										
Blank (W4B2291-BLK1)					Prepared: 02/28/24 Analyzed: 02/29/24					
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l						
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l						
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l						
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l						
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l						
N-Nitrosomorpholine	ND	0.68	2.0	ng/l						
N-Nitrosopiperidine	ND	0.65	2.0	ng/l						
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l						
<i>Surrogate(s)</i>										
NDMA-d6	27.6			ng/l	25.0		110 70-130			
LCS (W4B2291-BS1)					Prepared: 02/28/24 Analyzed: 02/29/24					
N-Nitrosodiethylamine	1.75	0.66	2.0	ng/l	2.00		87 50-150			J
N-Nitrosodimethylamine	2.80	1.3	2.0	ng/l	2.00		140 50-150			
N-Nitrosodi-n-butylamine	1.40	0.53	2.0	ng/l	2.00		70 50-150			J
N-Nitrosodi-n-propylamine	1.44	0.62	2.0	ng/l	2.00		72 50-150			J
N-Nitrosomethylethylamine	1.89	0.54	2.0	ng/l	2.00		95 50-150			J
N-Nitrosomorpholine	1.96	0.68	2.0	ng/l	2.00		98 50-150			J
N-Nitrosopiperidine	1.79	0.65	2.0	ng/l	2.00		90 50-150			J
N-Nitrosopyrrolidine	1.81	0.62	2.0	ng/l	2.00		91 50-150			J
<i>Surrogate(s)</i>										
NDMA-d6	30.2			ng/l	25.0		121 70-130			
LCS Dup (W4B2291-BSD1)					Prepared: 02/28/24 Analyzed: 02/29/24					
N-Nitrosodiethylamine	1.87	0.66	2.0	ng/l	2.00		93 50-150	6	50	J
N-Nitrosodimethylamine	2.65	1.3	2.0	ng/l	2.00		133 50-150	5	50	
N-Nitrosodi-n-butylamine	1.41	0.53	2.0	ng/l	2.00		70 50-150	0.9	50	J
N-Nitrosodi-n-propylamine	1.44	0.62	2.0	ng/l	2.00		72 50-150	0.07	50	J
N-Nitrosomethylethylamine	1.75	0.54	2.0	ng/l	2.00		88 50-150	8	50	J
N-Nitrosomorpholine	2.05	0.68	2.0	ng/l	2.00		102 50-150	5	50	
N-Nitrosopiperidine	1.75	0.65	2.0	ng/l	2.00		87 50-150	3	50	J
N-Nitrosopyrrolidine	1.80	0.62	2.0	ng/l	2.00		90 50-150	0.6	50	J
<i>Surrogate(s)</i>										
NDMA-d6	27.4			ng/l	25.0		109 70-130			
Batch: W4B2292 - EPA 521										
Blank (W4B2292-BLK1)					Prepared: 02/28/24 Analyzed: 03/04/24					
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l						
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l						
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l						
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l						
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l						

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Nitrosamines by CI GC/MS/MS, EPA 521 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2292 - EPA 521 (Continued)											
Blank (W4B2292-BLK1)						Prepared: 02/28/24 Analyzed: 03/04/24					
N-Nitrosomorpholine	ND	0.68	2.0	ng/l							
N-Nitrosopiperidine	ND	0.65	2.0	ng/l							
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l							
<i>Surrogate(s)</i>											
NDMA-d6	22.7			ng/l	25.0		91	70-130			
LCS (W4B2292-BS1)						Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	1.66	0.66	2.0	ng/l	2.00		83	50-150			J
N-Nitrosodimethylamine	2.26	1.3	2.0	ng/l	2.00		113	50-150			
N-Nitrosodi-n-butylamine	1.44	0.53	2.0	ng/l	2.00		72	50-150			J
N-Nitrosodi-n-propylamine	1.61	0.62	2.0	ng/l	2.00		80	50-150			J
N-Nitrosomethylethylamine	1.89	0.54	2.0	ng/l	2.00		95	50-150			J
N-Nitrosomorpholine	1.94	0.68	2.0	ng/l	2.00		97	50-150			J
N-Nitrosopiperidine	1.83	0.65	2.0	ng/l	2.00		91	50-150			J
N-Nitrosopyrrolidine	1.81	0.62	2.0	ng/l	2.00		90	50-150			J
<i>Surrogate(s)</i>											
NDMA-d6	24.6			ng/l	25.0		99	70-130			
Matrix Spike (W4B2292-MS1)						Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	1.85	0.66	2.0	ng/l	2.05	ND	90	50-150			J
N-Nitrosodimethylamine	2.08	1.3	2.0	ng/l	2.05	ND	101	50-150			
N-Nitrosodi-n-butylamine	1.54	0.53	2.0	ng/l	2.05	ND	75	50-150			J
N-Nitrosodi-n-propylamine	1.55	0.62	2.0	ng/l	2.05	ND	75	50-150			J
N-Nitrosomethylethylamine	2.03	0.54	2.0	ng/l	2.05	ND	99	50-150			
N-Nitrosomorpholine	1.87	0.68	2.0	ng/l	2.05	ND	91	50-150			J
N-Nitrosopiperidine	2.00	0.65	2.0	ng/l	2.05	ND	98	50-150			
N-Nitrosopyrrolidine	1.96	0.62	2.0	ng/l	2.05	ND	96	50-150			J
<i>Surrogate(s)</i>											
NDMA-d6	25.7			ng/l	25.7		100	70-130			
Matrix Spike Dup (W4B2292-MSD1)						Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	2.01	0.66	2.0	ng/l	2.05	ND	98	50-150	8	50	
N-Nitrosodimethylamine	2.03	1.3	2.0	ng/l	2.05	ND	99	50-150	2	50	
N-Nitrosodi-n-butylamine	1.73	0.53	2.0	ng/l	2.05	ND	84	50-150	12	50	J
N-Nitrosodi-n-propylamine	1.93	0.62	2.0	ng/l	2.05	ND	94	50-150	22	50	J
N-Nitrosomethylethylamine	2.16	0.54	2.0	ng/l	2.05	ND	105	50-150	6	50	
N-Nitrosomorpholine	1.98	0.68	2.0	ng/l	2.05	ND	96	50-150	5	50	J
N-Nitrosopiperidine	2.10	0.65	2.0	ng/l	2.05	ND	102	50-150	5	50	
N-Nitrosopyrrolidine	1.95	0.62	2.0	ng/l	2.05	ND	95	50-150	0.6	50	J
<i>Surrogate(s)</i>											
NDMA-d6	25.5			ng/l	25.6		99	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0369 - EPA 533											
Blank (W4C0369-BLK1)						Prepared: 03/06/24 Analyzed: 03/08/24					
11CI-PF3OUdS	ND	0.89	2.0	ng/l							
4:2 FTS	ND	0.83	2.0	ng/l							
6:2 FTS	ND	0.78	2.0	ng/l							
8:2 FTS	ND	0.68	2.0	ng/l							
9CI-PF3ONS	ND	0.84	2.0	ng/l							
ADONA	ND	0.71	2.0	ng/l							
HFPO-DA	ND	0.92	2.0	ng/l							
NFDHA	ND	0.75	2.0	ng/l							
PFBA	ND	0.61	2.0	ng/l							
PFBS	ND	0.46	2.0	ng/l							
PFDA	ND	0.64	2.0	ng/l							
PFDoA	ND	0.65	2.0	ng/l							
PFEESA	ND	0.45	2.0	ng/l							
PFHpA	ND	0.65	2.0	ng/l							
PFHpS	ND	0.60	2.0	ng/l							
PFHxA	ND	0.72	2.0	ng/l							
PFHxS	ND	0.99	2.0	ng/l							
PFMBA	ND	0.62	2.0	ng/l							
PFMPA	ND	0.42	2.0	ng/l							
PFNA	ND	0.88	2.0	ng/l							
PFOA	ND	0.92	2.0	ng/l							
PFOS	ND	0.68	2.0	ng/l							
PFPeA	ND	0.45	2.0	ng/l							
PFPeS	ND	0.50	2.0	ng/l							
PFUnA	ND	0.59	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-4:2 FTS	43.0			ng/l	40.0		107	50-200			
13C2-6:2 FTS	42.0			ng/l	40.0		105	50-200			
13C2-8:2 FTS	43.0			ng/l	40.0		108	50-200			
13C2-PFDoA	10.7			ng/l	10.0		107	50-200			
13C3-PFBS	11.4			ng/l	10.0		114	50-200			
13C3-PFHxS	11.3			ng/l	10.0		113	50-200			
13C4-PFBA	11.6			ng/l	10.0		116	50-200			
13C4-PFHpA	11.1			ng/l	10.0		111	50-200			
13C5-PFHxA	11.0			ng/l	10.0		110	50-200			
13C5-PFPeA	11.4			ng/l	10.0		114	50-200			
13C6-PFDA	11.3			ng/l	10.0		113	50-200			
13C7-PFUnA	11.0			ng/l	10.0		110	50-200			
13C8-PFOA	10.9			ng/l	10.0		109	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4C0369 - EPA 533 (Continued)											
Blank (W4C0369-BLK1)						Prepared: 03/06/24 Analyzed: 03/08/24					
<i>Surrogate(s)</i>											
13C8-PFOS	12.1			ng/l	10.0		121	50-200			
13C9-PFNA	10.9			ng/l	10.0		109	50-200			
HFPO-DA-13C3	10.4			ng/l	10.0		104	50-200			
LCS (W4C0369-BS1)						Prepared: 03/06/24 Analyzed: 03/08/24					
11CI-PF3OUdS	19.5	0.89	2.0	ng/l	20.0		98	70-130			
4:2 FTS	18.6	0.83	2.0	ng/l	20.0		93	70-130			
6:2 FTS	22.1	0.78	2.0	ng/l	20.0		110	70-130			
8:2 FTS	18.5	0.68	2.0	ng/l	20.0		93	70-130			
9CI-PF3ONS	19.9	0.84	2.0	ng/l	20.0		99	70-130			
ADONA	19.5	0.71	2.0	ng/l	20.0		98	70-130			
HFPO-DA	19.2	0.92	2.0	ng/l	20.0		96	70-130			
NFDHA	20.2	0.75	2.0	ng/l	20.0		101	70-130			
PFBA	20.0	0.61	2.0	ng/l	20.0		100	70-130			
PFBS	19.8	0.46	2.0	ng/l	20.0		99	70-130			
PFDA	20.0	0.64	2.0	ng/l	20.0		100	70-130			
PFDoA	20.7	0.65	2.0	ng/l	20.0		104	70-130			
PFEESA	19.8	0.45	2.0	ng/l	20.0		99	70-130			
PFHpA	20.0	0.65	2.0	ng/l	20.0		100	70-130			
PFHpS	20.2	0.60	2.0	ng/l	20.0		101	70-130			
PFHxA	19.8	0.72	2.0	ng/l	20.0		99	70-130			
PFHxS	19.9	0.99	2.0	ng/l	20.0		100	70-130			
PFMBA	20.1	0.62	2.0	ng/l	20.0		101	70-130			
PFMPA	20.1	0.42	2.0	ng/l	20.0		101	70-130			
PFNA	19.6	0.88	2.0	ng/l	20.0		98	70-130			
PFOA	19.8	0.92	2.0	ng/l	20.0		99	70-130			
PFOS	19.6	0.68	2.0	ng/l	20.0		98	70-130			
PFPeA	19.9	0.45	2.0	ng/l	20.0		99	70-130			
PFPeS	20.8	0.50	2.0	ng/l	20.0		104	70-130			
PFUnA	19.6	0.59	2.0	ng/l	20.0		98	70-130			
<i>Surrogate(s)</i>											
13C2-4:2 FTS	41.4			ng/l	40.0		104	50-200			
13C2-6:2 FTS	40.6			ng/l	40.0		102	50-200			
13C2-8:2 FTS	41.9			ng/l	40.0		105	50-200			
13C2-PFDoA	10.5			ng/l	10.0		105	50-200			
13C3-PFBS	11.6			ng/l	10.0		116	50-200			
13C3-PFHxS	11.3			ng/l	10.0		113	50-200			
13C4-PFBA	10.8			ng/l	10.0		108	50-200			
13C4-PFHpA	11.2			ng/l	10.0		112	50-200			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0369 - EPA 533 (Continued)											
LCS (W4C0369-BS1)						Prepared: 03/06/24 Analyzed: 03/08/24					
<i>Surrogate(s)</i>											
13C5-PFHxA	10.9			ng/l	10.0		109	50-200			
13C5-PFPeA	11.1			ng/l	10.0		111	50-200			
13C6-PFDA	11.1			ng/l	10.0		111	50-200			
13C7-PFUnA	11.1			ng/l	10.0		111	50-200			
13C8-PFOA	11.1			ng/l	10.0		111	50-200			
13C8-PFOS	11.3			ng/l	10.0		113	50-200			
13C9-PFNA	11.1			ng/l	10.0		111	50-200			
HFPO-DA-13C3	10.6			ng/l	10.0		106	50-200			
LCS Dup (W4C0369-BSD1)						Prepared: 03/06/24 Analyzed: 03/08/24					
11CI-PF3OUdS	18.3	0.89	2.0	ng/l	20.0		91	70-130	7	30	
4:2 FTS	17.0	0.83	2.0	ng/l	20.0		85	70-130	9	30	
6:2 FTS	20.6	0.78	2.0	ng/l	20.0		103	70-130	7	30	
8:2 FTS	19.2	0.68	2.0	ng/l	20.0		96	70-130	4	30	
9CI-PF3ONS	18.3	0.84	2.0	ng/l	20.0		91	70-130	8	30	
ADONA	19.3	0.71	2.0	ng/l	20.0		96	70-130	1	30	
HFPO-DA	19.2	0.92	2.0	ng/l	20.0		96	70-130	0.1	30	
NFDHA	17.4	0.75	2.0	ng/l	20.0		87	70-130	15	30	
PFBA	20.0	0.61	2.0	ng/l	20.0		100	70-130	0.2	30	
PFBS	20.5	0.46	2.0	ng/l	20.0		102	70-130	3	30	
PFDA	20.4	0.64	2.0	ng/l	20.0		102	70-130	2	30	
PFDoA	19.5	0.65	2.0	ng/l	20.0		98	70-130	6	30	
PFEESA	19.4	0.45	2.0	ng/l	20.0		97	70-130	2	30	
PFHpA	19.9	0.65	2.0	ng/l	20.0		99	70-130	0.6	30	
PFHpS	19.4	0.60	2.0	ng/l	20.0		97	70-130	4	30	
PFHxA	18.8	0.72	2.0	ng/l	20.0		94	70-130	5	30	
PFHxS	19.6	0.99	2.0	ng/l	20.0		98	70-130	2	30	
PFMBA	19.2	0.62	2.0	ng/l	20.0		96	70-130	5	30	
PFMPA	20.0	0.42	2.0	ng/l	20.0		100	70-130	0.3	30	
PFNA	20.2	0.88	2.0	ng/l	20.0		101	70-130	3	30	
PFOA	19.2	0.92	2.0	ng/l	20.0		96	70-130	3	30	
PFOS	18.6	0.68	2.0	ng/l	20.0		93	70-130	5	30	
PFPeA	19.9	0.45	2.0	ng/l	20.0		99	70-130	0.1	30	
PFPeS	20.0	0.50	2.0	ng/l	20.0		100	70-130	4	30	
PFUnA	19.0	0.59	2.0	ng/l	20.0		95	70-130	3	30	
<i>Surrogate(s)</i>											
13C2-4:2 FTS	45.0			ng/l	40.0		113	50-200			
13C2-6:2 FTS	43.4			ng/l	40.0		109	50-200			
13C2-8:2 FTS	44.2			ng/l	40.0		111	50-200			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0369 - EPA 533 (Continued)											
LCS Dup (W4C0369-BSD1)											
<i>Surrogate(s)</i>											
13C2-PFDoA	10.8			ng/l	10.0		108	50-200			
13C3-PFBS	12.3			ng/l	10.0		123	50-200			
13C3-PFHxS	12.1			ng/l	10.0		121	50-200			
13C4-PFBA	11.4			ng/l	10.0		114	50-200			
13C4-PFHpA	11.3			ng/l	10.0		113	50-200			
13C5-PFHxA	11.6			ng/l	10.0		116	50-200			
13C5-PFPeA	11.8			ng/l	10.0		118	50-200			
13C6-PFDA	10.6			ng/l	10.0		106	50-200			
13C7-PFUnA	11.1			ng/l	10.0		111	50-200			
13C8-PFOA	11.5			ng/l	10.0		115	50-200			
13C8-PFOS	12.5			ng/l	10.0		125	50-200			
13C9-PFNA	11.1			ng/l	10.0		111	50-200			
HFPO-DA-13C3	11.5			ng/l	10.0		115	50-200			

Prepared: 03/06/24 Analyzed: 03/08/24

Batch: W4C0509 - EPA 533

Blank (W4C0509-BLK1)											
11CI-PF3OUdS	ND	0.89	2.0	ng/l							
4:2 FTS	ND	0.83	2.0	ng/l							
6:2 FTS	ND	0.78	2.0	ng/l							
8:2 FTS	ND	0.68	2.0	ng/l							
9CI-PF3ONS	ND	0.84	2.0	ng/l							
ADONA	ND	0.71	2.0	ng/l							
HFPO-DA	ND	0.92	2.0	ng/l							
NFDHA	ND	0.75	2.0	ng/l							
PFBA	ND	0.61	2.0	ng/l							
PFBS	ND	0.46	2.0	ng/l							
PFDA	ND	0.64	2.0	ng/l							
PFDoA	ND	0.65	2.0	ng/l							
PFEESA	ND	0.45	2.0	ng/l							
PFHpA	ND	0.65	2.0	ng/l							
PFHpS	ND	0.60	2.0	ng/l							
PFHxA	ND	0.72	2.0	ng/l							
PFHxS	ND	0.99	2.0	ng/l							
PFMBA	ND	0.62	2.0	ng/l							
PFMPA	ND	0.42	2.0	ng/l							
PFNA	ND	0.88	2.0	ng/l							
PFOA	ND	0.92	2.0	ng/l							
PFOS	ND	0.68	2.0	ng/l							
PFPeA	ND	0.45	2.0	ng/l							

Prepared: 03/07/24 Analyzed: 03/10/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)											
Blank (W4C0509-BLK1)											
Prepared: 03/07/24 Analyzed: 03/10/24											
PFPeS	ND	0.50	2.0	ng/l							
PUnA	ND	0.59	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-4:2 FTS	42.8			ng/l	40.0		107	50-200			
13C2-6:2 FTS	44.3			ng/l	40.0		111	50-200			
13C2-8:2 FTS	41.5			ng/l	40.0		104	50-200			
13C2-PFDoA	10.2			ng/l	10.0		102	50-200			
13C3-PFBS	11.2			ng/l	10.0		112	50-200			
13C3-PFHxS	11.3			ng/l	10.0		113	50-200			
13C4-PFBA	10.7			ng/l	10.0		107	50-200			
13C4-PFHpA	10.4			ng/l	10.0		104	50-200			
13C5-PFHxA	10.8			ng/l	10.0		108	50-200			
13C5-PFPeA	10.8			ng/l	10.0		108	50-200			
13C6-PFDA	10.7			ng/l	10.0		107	50-200			
13C7-PFUnA	10.3			ng/l	10.0		103	50-200			
13C8-PFOA	10.2			ng/l	10.0		102	50-200			
13C8-PFOS	10.8			ng/l	10.0		108	50-200			
13C9-PFNA	10.3			ng/l	10.0		103	50-200			
HFPO-DA-13C3	9.79			ng/l	10.0		98	50-200			
LCS (W4C0509-BS1)											
Prepared: 03/07/24 Analyzed: 03/10/24											
11CI-PF3OUdS	2.33	0.89	2.0	ng/l	2.00		116	50-150			
4:2 FTS	2.54	0.83	2.0	ng/l	2.00		127	50-150			
6:2 FTS	2.64	0.78	2.0	ng/l	2.00		132	50-150			
8:2 FTS	2.56	0.68	2.0	ng/l	2.00		128	50-150			
9CI-PF3ONS	2.22	0.84	2.0	ng/l	2.00		111	50-150			
ADONA	2.36	0.71	2.0	ng/l	2.00		118	50-150			
HFPO-DA	2.43	0.92	2.0	ng/l	2.00		121	50-150			
NFDHA	2.41	0.75	2.0	ng/l	2.00		120	50-150			
PFBA	2.46	0.61	2.0	ng/l	2.00		123	50-150			
PFBS	2.46	0.46	2.0	ng/l	2.00		123	50-150			
PFDA	2.26	0.64	2.0	ng/l	2.00		113	50-150			
PFDoA	2.41	0.65	2.0	ng/l	2.00		121	50-150			
PFEESA	2.22	0.45	2.0	ng/l	2.00		111	50-150			
PFHpA	2.23	0.65	2.0	ng/l	2.00		111	50-150			
PFHpS	2.35	0.60	2.0	ng/l	2.00		118	50-150			
PFHxA	2.41	0.72	2.0	ng/l	2.00		121	50-150			
PFHxS	2.51	0.99	2.0	ng/l	2.00		126	50-150			
PFMBA	2.34	0.62	2.0	ng/l	2.00		117	50-150			
PFMPA	2.34	0.42	2.0	ng/l	2.00		117	50-150			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)										
LCS (W4C0509-BS1)					Prepared: 03/07/24 Analyzed: 03/10/24					
PFNA	2.05	0.88	2.0	ng/l	2.00	103	50-150			
PFOA	2.41	0.92	2.0	ng/l	2.00	121	50-150			
PFOS	2.17	0.68	2.0	ng/l	2.00	109	50-150			
PFPeA	2.24	0.45	2.0	ng/l	2.00	112	50-150			
PFPeS	2.47	0.50	2.0	ng/l	2.00	123	50-150			
PFUnA	2.34	0.59	2.0	ng/l	2.00	117	50-150			
<i>Surrogate(s)</i>										
13C2-4:2 FTS	40.5			ng/l	40.0	101	50-200			
13C2-6:2 FTS	40.8			ng/l	40.0	102	50-200			
13C2-8:2 FTS	41.6			ng/l	40.0	104	50-200			
13C2-PFDoA	10.2			ng/l	10.0	102	50-200			
13C3-PFBS	11.0			ng/l	10.0	110	50-200			
13C3-PFHxS	10.8			ng/l	10.0	108	50-200			
13C4-PFBA	11.3			ng/l	10.0	113	50-200			
13C4-PFHpA	10.5			ng/l	10.0	105	50-200			
13C5-PFHxA	10.4			ng/l	10.0	104	50-200			
13C5-PFPeA	11.4			ng/l	10.0	114	50-200			
13C6-PFDA	10.8			ng/l	10.0	108	50-200			
13C7-PFUnA	10.6			ng/l	10.0	106	50-200			
13C8-PFOA	10.3			ng/l	10.0	103	50-200			
13C8-PFOS	10.9			ng/l	10.0	109	50-200			
13C9-PFNA	11.0			ng/l	10.0	110	50-200			
HFPO-DA-13C3	10.5			ng/l	10.0	105	50-200			
LCS Dup (W4C0509-BSD1)					Prepared: 03/07/24 Analyzed: 03/10/24					
11CI-PF3OUdS	2.25	0.89	2.0	ng/l	2.00	113	50-150	3	30	
4:2 FTS	2.14	0.83	2.0	ng/l	2.00	107	50-150	17	30	
6:2 FTS	2.61	0.78	2.0	ng/l	2.00	130	50-150	1	30	
8:2 FTS	2.91	0.68	2.0	ng/l	2.00	146	50-150	13	30	
9CI-PF3ONS	2.11	0.84	2.0	ng/l	2.00	105	50-150	5	30	
ADONA	2.23	0.71	2.0	ng/l	2.00	111	50-150	6	30	
HFPO-DA	2.01	0.92	2.0	ng/l	2.00	100	50-150	19	30	
NFDHA	2.09	0.75	2.0	ng/l	2.00	105	50-150	14	30	
PFBA	2.40	0.61	2.0	ng/l	2.00	120	50-150	2	30	
PFBS	2.20	0.46	2.0	ng/l	2.00	110	50-150	11	30	
PFDA	2.23	0.64	2.0	ng/l	2.00	111	50-150	2	30	
PFDoA	2.22	0.65	2.0	ng/l	2.00	111	50-150	8	30	
PFEESA	2.26	0.45	2.0	ng/l	2.00	113	50-150	2	30	
PFHpA	2.21	0.65	2.0	ng/l	2.00	111	50-150	0.9	30	
PFHpS	2.26	0.60	2.0	ng/l	2.00	113	50-150	4	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0509 - EPA 533 (Continued)											
LCS Dup (W4C0509-BSD1)						Prepared: 03/07/24 Analyzed: 03/10/24					
PFHxA	2.08	0.72	2.0	ng/l	2.00		104	50-150	15	30	
PFHxS	2.15	0.99	2.0	ng/l	2.00		107	50-150	16	30	
PFMBA	2.31	0.62	2.0	ng/l	2.00		116	50-150	1	30	
PFMPA	2.22	0.42	2.0	ng/l	2.00		111	50-150	5	30	
PFNA	2.46	0.88	2.0	ng/l	2.00		123	50-150	18	30	
PFOA	2.39	0.92	2.0	ng/l	2.00		120	50-150	0.9	30	
PFOS	2.43	0.68	2.0	ng/l	2.00		122	50-150	11	30	
PFPeA	2.24	0.45	2.0	ng/l	2.00		112	50-150	0.2	30	
PFPeS	2.12	0.50	2.0	ng/l	2.00		106	50-150	15	30	
PFUnA	2.31	0.59	2.0	ng/l	2.00		115	50-150	1	30	
<i>Surrogate(s)</i>											
13C2-4:2 FTS	40.0			ng/l	40.0		100	50-200			
13C2-6:2 FTS	40.4			ng/l	40.0		101	50-200			
13C2-8:2 FTS	39.6			ng/l	40.0		99	50-200			
13C2-PFDoA	10.4			ng/l	10.0		104	50-200			
13C3-PFBS	10.2			ng/l	10.0		102	50-200			
13C3-PFHxS	10.7			ng/l	10.0		107	50-200			
13C4-PFBA	11.1			ng/l	10.0		111	50-200			
13C4-PFHpA	10.4			ng/l	10.0		104	50-200			
13C5-PFHxA	10.6			ng/l	10.0		106	50-200			
13C5-PFPeA	10.7			ng/l	10.0		107	50-200			
13C6-PFDA	10.5			ng/l	10.0		105	50-200			
13C7-PFUnA	10.1			ng/l	10.0		101	50-200			
13C8-PFOA	10.2			ng/l	10.0		102	50-200			
13C8-PFOS	11.1			ng/l	10.0		111	50-200			
13C9-PFNA	10.6			ng/l	10.0		106	50-200			
HFPO-DA-13C3	10.7			ng/l	10.0		107	50-200			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Perchlorate by EPA 314.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier	
Batch: W4B1668 - EPA 314.0												
Blank (W4B1668-BLK1)												
Perchlorate	ND	0.26	1.0	ug/l	Prepared & Analyzed: 02/21/24							
LCS (W4B1668-BS1)												
Perchlorate	9.56	0.26	1.0	ug/l	10.0		96	85-115				
Matrix Spike (W4B1668-MS1)												
					Source: 4B09022-01			Prepared & Analyzed: 02/21/24				
Perchlorate	14.3	0.26	1.0	ug/l	10.0	5.39	90	80-120				
Matrix Spike Dup (W4B1668-MSD1)												
					Source: 4B09022-01			Prepared & Analyzed: 02/21/24				
Perchlorate	14.6	0.26	1.0	ug/l	10.0	5.39	92	80-120	2	15		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Radiological Parameters by APHA/EPA Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0565 - EPA 900.0											
Blank (W4C0565-BLK1)											
Gross Alpha	-0.0900			pCi/L							
Counting Uncertainty:	0.355	MDA:	0.616								
Gross Beta	-0.752			pCi/L							
Counting Uncertainty:	0.596	MDA:	0.983								
LCS (W4C0565-BS1)											
Gross Alpha	9.20			pCi/L	12.0		77	60-110			
Counting Uncertainty:	0.676	MDA:	0.684								
Gross Beta	13.0			pCi/L	16.0		81	72-123			
Counting Uncertainty:	0.736	MDA:	0.78								
Matrix Spike (W4C0565-MS1) Source: 3L04005-04											
Gross Alpha	7.90			pCi/L	12.0	0.152	65	28-124			
Counting Uncertainty:	0.872	MDA:	1.069								
Gross Beta	12.1			pCi/L	16.0	0.850	70	61-125			
Counting Uncertainty:	0.896	MDA:	1.178								
Matrix Spike (W4C0565-MS2) Source: 4B09021-01											
Gross Alpha	72.0			pCi/L	240	-4.21	30	28-124			
Counting Uncertainty:	13.618	MDA:	18.835								
Gross Beta	301			pCi/L	320	65.2	74	61-125			
Counting Uncertainty:	15.954	MDA:	17.962								
Matrix Spike Dup (W4C0565-MSD1) Source: 3L04005-04											
Gross Alpha	6.30			pCi/L	12.0	0.152	51	28-124	23	30	
Counting Uncertainty:	0.807	MDA:	1.018								
Gross Beta	12.3			pCi/L	16.0	0.850	72	61-125	2	30	
Counting Uncertainty:	0.751	MDA:	0.857								
Matrix Spike Dup (W4C0565-MSD2) Source: 4B09021-01											
Gross Alpha	72.1			pCi/L	240	-4.21	30	28-124	0.2	30	
Counting Uncertainty:	12.807	MDA:	17.114								
Gross Beta	278			pCi/L	320	65.2	66	61-125	8	30	
Counting Uncertainty:	17.091	MDA:	21.238								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2											
Blank (W4B2424-BLK1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	ND	0.063	0.10	ug/l							
Atrazine	ND	0.042	0.10	ug/l							
Benzo (a) pyrene	ND	0.045	0.10	ug/l							
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							
Bromacil	ND	0.24	0.50	ug/l							
Butachlor	ND	0.040	0.10	ug/l							
Captan	ND	0.32	1.0	ug/l							
Chlorpropham	ND	0.040	0.10	ug/l							
Diazinon	ND	0.022	0.10	ug/l							
Dimethoate	ND	0.041	0.20	ug/l							
Diphenamid	ND	0.030	0.10	ug/l							
Disulfoton	ND	0.11	0.20	ug/l							
EPTC	ND	0.020	0.10	ug/l							
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							
Metolachlor	ND	0.030	0.10	ug/l							
Metribuzin	ND	0.030	0.10	ug/l							
Molinate	ND	0.030	0.10	ug/l							
Prometryn	ND	0.030	0.10	ug/l							
Simazine	ND	0.058	0.10	ug/l							
Terbacil	ND	0.090	2.0	ug/l							
Thiobencarb	ND	0.069	0.10	ug/l							
Trithion	ND	0.054	0.10	ug/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00		99	70-130			
Perylene-d12	3.66			ug/l	5.00		73	50-120			
Triphenyl phosphate	4.65			ug/l	5.00		93	70-130			
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	ND	0.063	0.10	ug/l							QC-2
Atrazine	ND	0.042	0.10	ug/l							QC-2
Benzo (a) pyrene	ND	0.045	0.10	ug/l							QC-2
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							QC-2
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							QC-2
Bromacil	ND	0.24	0.50	ug/l							QC-2
Butachlor	ND	0.040	0.10	ug/l							QC-2
Captan	ND	0.32	1.0	ug/l							QC-2
Chlorpropham	ND	0.040	0.10	ug/l							QC-2
Diazinon	ND	0.022	0.10	ug/l							QC-2
Dimethoate	ND	0.041	0.20	ug/l							QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatle Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Diphenamid	ND	0.030	0.10	ug/l							QC-2
Disulfoton	ND	0.11	0.20	ug/l							QC-2
EPTC	ND	0.020	0.10	ug/l							QC-2
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							QC-2
Metolachlor	ND	0.030	0.10	ug/l							QC-2
Metribuzin	ND	0.030	0.10	ug/l							QC-2
Molinate	ND	0.030	0.10	ug/l							QC-2
Prometryn	ND	0.030	0.10	ug/l							QC-2
Simazine	ND	0.058	0.10	ug/l							QC-2
Terbacil	ND	0.090	2.0	ug/l							QC-2
Thiobencarb	ND	0.069	0.10	ug/l							QC-2
Trithion	ND	0.054	0.10	ug/l							QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.84			ug/l	5.00		97	70-130			QC-2
Perylene-d12	4.14			ug/l	5.00		83	50-120			QC-2
Triphenyl phosphate	4.92			ug/l	5.00		98	70-130			QC-2
LCS (W4B2424-BS1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	9.57	0.063	0.10	ug/l	7.50		128	70-130			
Atrazine	4.30	0.042	0.10	ug/l	5.00		86	70-130			
Benzo (a) pyrene	4.04	0.045	0.10	ug/l	5.00		81	60-130			
Bis(2-ethylhexyl)adipate	8.19	0.38	5.0	ug/l	5.00		164	70-130			Q-08
Bis(2-ethylhexyl)phthalate	5.93	0.41	3.0	ug/l	5.00		119	70-130			
Bromacil	6.45	0.24	0.50	ug/l	5.00		129	70-130			
Butachlor	5.81	0.040	0.10	ug/l	5.00		116	70-130			
Captan	5.59	0.32	1.0	ug/l	5.00		112	70-130			
Chlorpropham	5.18	0.040	0.10	ug/l	5.00		104	70-130			
Diazinon	3.38	0.022	0.10	ug/l	5.00		68	50-120			
Dimethoate	3.81	0.041	0.20	ug/l	5.00		76	50-120			
Diphenamid	5.69	0.030	0.10	ug/l	5.00		114	70-130			
Disulfoton	3.98	0.11	0.20	ug/l	5.00		80	50-120			
EPTC	4.45	0.020	0.10	ug/l	5.00		89	70-130			
Hexachlorocyclopentadiene	2.20	0.092	1.0	ug/l	2.50		88	33-106			
Metolachlor	6.29	0.030	0.10	ug/l	5.00		126	60-130			
Metribuzin	5.45	0.030	0.10	ug/l	5.00		109	50-120			
Molinate	3.79	0.030	0.10	ug/l	5.00		76	70-130			
Prometryn	3.05	0.030	0.10	ug/l	5.00		61	30-120			
Simazine	4.66	0.058	0.10	ug/l	5.00		93	60-130			
Terbacil	5.12	0.090	2.0	ug/l	5.00		102	70-130			
Thiobencarb	6.72	0.069	0.10	ug/l	5.00		134	70-130			Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS (W4B2424-BS1)										
Trithion	6.14	0.054	0.10	ug/l	5.00		123 70-130			
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	2.62			ug/l	5.00		52 70-130			S-11
Perylene-d12	4.14			ug/l	5.00		83 50-120			
Triphenyl phosphate	4.38			ug/l	5.00		88 70-130			
LCS (W4B2424-BS2)										
Prepared: 02/29/24 Analyzed: 03/23/24										
Alachlor	7.14	0.063	0.10	ug/l	7.50		95 70-130			QC-2
Atrazine	4.76	0.042	0.10	ug/l	5.00		95 70-130			QC-2
Benzo (a) pyrene	4.07	0.045	0.10	ug/l	5.00		81 60-130			QC-2
Bis(2-ethylhexyl)adipate	5.27	0.38	5.0	ug/l	5.00		105 70-130			QC-2
Bis(2-ethylhexyl)phthalate	4.97	0.41	3.0	ug/l	5.00		99 70-130			QC-2
Bromacil	4.80	0.24	0.50	ug/l	5.00		96 70-130			QC-2
Butachlor	4.38	0.040	0.10	ug/l	5.00		88 70-130			QC-2
Captan	4.76	0.32	1.0	ug/l	5.00		95 70-130			QC-2
Chlorpropham	4.70	0.040	0.10	ug/l	5.00		94 70-130			QC-2
Diazinon	3.01	0.022	0.10	ug/l	5.00		60 50-120			QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00		76 50-120			QC-2
Diphenamid	4.98	0.030	0.10	ug/l	5.00		100 70-130			QC-2
Disulfoton	4.23	0.11	0.20	ug/l	5.00		85 50-120			QC-2
EPTC	5.02	0.020	0.10	ug/l	5.00		100 70-130			QC-2
Hexachlorocyclopentadiene	2.06	0.092	1.0	ug/l	2.50		82 33-106			QC-2
Metolachlor	4.64	0.030	0.10	ug/l	5.00		93 60-130			QC-2
Metribuzin	4.44	0.030	0.10	ug/l	5.00		89 50-120			QC-2
Molinate	4.95	0.030	0.10	ug/l	5.00		99 70-130			QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00		60 30-120			QC-2
Simazine	4.53	0.058	0.10	ug/l	5.00		91 60-130			QC-2
Terbacil	5.50	0.090	2.0	ug/l	5.00		110 70-130			QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00		99 70-130			QC-2
Trithion	4.63	0.054	0.10	ug/l	5.00		93 70-130			QC-2
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	4.96			ug/l	5.00		99 70-130			QC-2
Perylene-d12	4.41			ug/l	5.00		88 50-120			QC-2
Triphenyl phosphate	4.83			ug/l	5.00		97 70-130			QC-2
LCS Dup (W4B2424-BSD1)										
Prepared: 02/29/24 Analyzed: 03/09/24										
Alachlor	10.3	0.063	0.10	ug/l	7.50		137 70-130	7	30	Q-08
Atrazine	4.62	0.042	0.10	ug/l	5.00		92 70-130	7	30	
Benzo (a) pyrene	4.17	0.045	0.10	ug/l	5.00		83 60-130	3	30	
Bis(2-ethylhexyl)adipate	7.82	0.38	5.0	ug/l	5.00		156 70-130	5	30	Q-08
Bis(2-ethylhexyl)phthalate	6.69	0.41	3.0	ug/l	5.00		134 70-130	12	30	Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS Dup (W4B2424-BSD1)					Prepared: 02/29/24 Analyzed: 03/09/24					
Bromacil	6.32	0.24	0.50	ug/l	5.00	126	70-130	2	30	
Butachlor	5.69	0.040	0.10	ug/l	5.00	114	70-130	2	30	
Captan	6.03	0.32	1.0	ug/l	5.00	121	70-130	8	30	
Chlorpropham	5.50	0.040	0.10	ug/l	5.00	110	70-130	6	30	
Diazinon	3.48	0.022	0.10	ug/l	5.00	70	50-120	3	30	
Dimethoate	4.25	0.041	0.20	ug/l	5.00	85	50-120	11	30	
Diphenamid	5.82	0.030	0.10	ug/l	5.00	116	70-130	2	30	
Disulfoton	4.30	0.11	0.20	ug/l	5.00	86	50-120	8	30	
EPTC	4.82	0.020	0.10	ug/l	5.00	96	70-130	8	30	
Hexachlorocyclopentadiene	2.39	0.092	1.0	ug/l	2.50	96	33-106	8	30	
Metolachlor	6.82	0.030	0.10	ug/l	5.00	136	60-130	8	30	Q-08
Metribuzin	5.82	0.030	0.10	ug/l	5.00	116	50-120	7	30	
Molinate	4.08	0.030	0.10	ug/l	5.00	82	70-130	7	30	
Prometryn	2.94	0.030	0.10	ug/l	5.00	59	30-120	4	30	
Simazine	4.92	0.058	0.10	ug/l	5.00	98	60-130	5	30	
Terbacil	5.48	0.090	2.0	ug/l	5.00	110	70-130	7	30	
Thiobencarb	6.91	0.069	0.10	ug/l	5.00	138	70-130	3	30	Q-08
Trithion	6.93	0.054	0.10	ug/l	5.00	139	70-130	12	30	Q-08
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	5.26			ug/l	5.00	105	70-130			
Perylene-d12	3.95			ug/l	5.00	79	50-120			
Triphenyl phosphate	4.36			ug/l	5.00	87	70-130			
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	7.05	0.063	0.10	ug/l	7.50	94	70-130	1	30	QC-2
Atrazine	4.88	0.042	0.10	ug/l	5.00	98	70-130	2	30	QC-2
Benzo (a) pyrene	4.12	0.045	0.10	ug/l	5.00	82	60-130	1	30	QC-2
Bis(2-ethylhexyl)adipate	5.68	0.38	5.0	ug/l	5.00	114	70-130	7	30	QC-2
Bis(2-ethylhexyl)phthalate	5.39	0.41	3.0	ug/l	5.00	108	70-130	8	30	QC-2
Bromacil	4.68	0.24	0.50	ug/l	5.00	94	70-130	2	30	QC-2
Butachlor	4.62	0.040	0.10	ug/l	5.00	92	70-130	6	30	QC-2
Captan	4.96	0.32	1.0	ug/l	5.00	99	70-130	4	30	QC-2
Chlorpropham	5.17	0.040	0.10	ug/l	5.00	103	70-130	10	30	QC-2
Diazinon	2.81	0.022	0.10	ug/l	5.00	56	50-120	7	30	QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00	76	50-120	0.2	30	QC-2
Diphenamid	5.12	0.030	0.10	ug/l	5.00	102	70-130	3	30	QC-2
Disulfoton	4.28	0.11	0.20	ug/l	5.00	86	50-120	1	30	QC-2
EPTC	5.25	0.020	0.10	ug/l	5.00	105	70-130	5	30	QC-2
Hexachlorocyclopentadiene	2.16	0.092	1.0	ug/l	2.50	87	33-106	5	30	QC-2
Metolachlor	4.55	0.030	0.10	ug/l	5.00	91	60-130	2	30	QC-2

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24						
Metribuzin	4.48	0.030	0.10	ug/l	5.00	90	50-120	1	30		QC-2
Molinate	5.69	0.030	0.10	ug/l	5.00	114	70-130	14	30		QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00	60	30-120	0.1	30		QC-2
Simazine	4.22	0.058	0.10	ug/l	5.00	84	60-130	7	30		QC-2
Terbacil	5.64	0.090	2.0	ug/l	5.00	113	70-130	3	30		QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00	99	70-130	0.03	30		QC-2
Trithion	4.58	0.054	0.10	ug/l	5.00	92	70-130	1	30		QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00	99	70-130				QC-2
Perylene-d12	4.23			ug/l	5.00	85	50-120				QC-2
Triphenyl phosphate	4.92			ug/l	5.00	98	70-130				QC-2

Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0010 - EPA 1613B											
Blank (W4C0010-BLK1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l							
LCS (W4C0010-BS1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	7.98	2.48	5.00	pg/l	10.0	80	73-146				
LCS Dup (W4C0010-BSD1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	9.48	2.48	5.00	pg/l	10.0	95	73-146	17	20		

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/04/2024 08:44

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Volatile Organics by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2414 - EPA 524.3										
Blank (W4B2414-BLK1)					Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l						
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l						
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.426			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.413			ug/l	0.400		103 70-130			
LCS (W4B2414-BS1)					Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	0.0625	0.0042	0.010	ug/l	0.0500		125 70-130			
1,2-Dibromoethane (EDB)	0.0563	0.0029	0.020	ug/l	0.0500		113 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.419			ug/l	0.400		105 70-130			
4-Bromofluorobenzene	0.409			ug/l	0.400		102 70-130			
LCS Dup (W4B2414-BSD1)					Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	0.0608	0.0042	0.010	ug/l	0.0500		122 70-130	3	30	
1,2-Dibromoethane (EDB)	0.0569	0.0029	0.020	ug/l	0.0500		114 70-130	1	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.422			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.414			ug/l	0.400		104 70-130			
Duplicate (W4B2414-DUP1)					Source: 4B15126-01 Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l		ND			30	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l		ND			30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.425			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.415			ug/l	0.400		104 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/04/2024 08:44

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
O-05	The extraction for this analyte was performed outside of the EPA recommended holding time.
Q-02	Low recovery of this analyte in the QC sample. The analysis of the low level standard produced acceptable recovery indicating that the sample result might be accurately reported as Not Detected.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
U	Result not detected above the detection limit
%REC	Percent Recovery
Dil	Dilution
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20133

Report Date: 4/30/2024

Received Date: 02/18/2024

Project: COSM 97-005 - DDW Standards

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

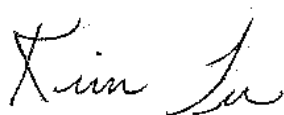
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/18/24 with the Chain-of-Custody document. The samples were received in good condition, at 12.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-7-S22	Brown & Caldwell	4B20133-01	Water	02/18/24 09:55	
AT-RES-7-S22D	Brown & Caldwell	4B20133-02	Water	02/18/24 14:35	
AT-RES-7-S22	Brown & Caldwell	4B20133-03	Water	02/18/24 00:00	
AT-RES-7-S22D	Brown & Caldwell	4B20133-04	Water	02/18/24 00:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 1613B in Water				
2,3,7,8-TCDD (Dioxin)	1746-01-6		⊗	
EPA 508.1 in Water				
Aldrin	309-00-2	⊗		⊗
alpha-BHC	319-84-6	⊗		⊗
beta-BHC	319-85-7	⊗		⊗
delta-BHC	319-86-8	⊗		⊗
gamma-BHC (Lindane)	58-89-9			⊗
4,4'-DDD	72-54-8	⊗		⊗
4,4'-DDE	72-55-9	⊗		⊗
4,4'-DDT	50-29-3	⊗		⊗
Dieldrin	60-57-1	⊗		⊗
Endosulfan I	959-98-8	⊗		⊗
Endosulfan II	33213-65-9	⊗		⊗
Endosulfan sulfate	1031-07-8	⊗		⊗
Endrin aldehyde	7421-93-4	⊗		⊗
Chlorothalonil	1897-45-6	⊗	⊗	⊗
Trifluralin	1582-09-8	⊗		⊗
Toxaphene	8001-35-2			⊗
PCBs, Total				⊗
EPA 515.4 in Water				
3,5-Dichlorobenzoic acid	51-36-5	⊗		⊗
Dichloroprop	120-36-5	⊗		⊗
2,4,5-T	93-76-5	⊗		⊗
2,4-DB	94-82-6	⊗		⊗
DCPA	1861-32-1	⊗		⊗
Acifluorfen	50594-66-6	⊗		⊗
Chloramben	133-90-4	⊗	⊗	⊗
EPA 521 in Water				
N-Nitrosodimethylamine	62-75-9	⊗	⊗	⊗
N-Nitrosomethylethylamine	10595-95-6	⊗	⊗	⊗
N-Nitrosodiethylamine	55-18-5	⊗	⊗	⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 521 in Water (Continued)				
N-Nitrosodi-n-propylamine	621-64-7	⊗	⊗	⊗
N-Nitrosomorpholine	59-89-2	⊗	⊗	⊗
N-Nitrosopyrrolidine	930-55-2	⊗	⊗	⊗
N-Nitrosopiperidine	100-75-4	⊗	⊗	⊗
N-Nitrosodi-n-butylamine	924-16-3	⊗	⊗	⊗
NDMA-d6		⊗	⊗	⊗
EPA 525.2 in Water				
Bromacil	314-40-9	⊗		⊗
Captan	133-06-2	⊗	⊗	⊗
Chlorpropham	101-21-3	⊗		⊗
Diazinon	333-41-5	⊗		⊗
Dimethoate	60-51-5	⊗	⊗	⊗
Diphenamid	957-51-7	⊗		⊗
Disulfoton	298-04-4	⊗		⊗
EPTC	759-94-4	⊗		⊗
Metolachlor	51218-45-2	⊗		⊗
Metribuzin	21087-64-9	⊗		⊗
Prometryn	7287-19-6	⊗		⊗
Terbacil	5902-51-2	⊗		⊗
Trithion	786-19-6	⊗	⊗	⊗
EPA 531.2 in Water				
Propoxur (Baygon)	114-26-1	⊗		⊗
Methiocarb	2032-65-7	⊗		⊗
EPA 556 in Water				
Formaldehyde	50-00-0	⊗	⊗	⊗
2,4,5-TFAP	129322-83-4	⊗	⊗	⊗
EPA 8015B in Water				
Ethylene glycol	107-21-1	⊗		⊗
EPA 8330A in Water				
HMX	2691-41-0	⊗		⊗
RDX	121-82-4	⊗		⊗
1,3,5-Trinitrobenzene	99-35-4			⊗
1,3-Dinitrobenzene	99-65-0			⊗
Nitrobenzene	98-95-3			⊗
Tetryl	479-45-8	⊗		⊗
2,4,6-Trinitrotoluene	118-96-7			⊗
4-Amino-2,6-Dinitrotoluene	19406-51-0	⊗	⊗	⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 8330A in Water (Continued)				
2-Amino-4,6-Dinitrotoluene	35572-78-2	⊗		⊗
2,6-Dinitrotoluene	606-20-2			⊗
2,4-Dinitrotoluene	121-14-2			⊗
2-Nitrotoluene	88-72-2			⊗
4-Nitrotoluene	99-99-0			⊗
3-Nitrotoluene	99-08-1			⊗
EPA 900.0 in Water				
Gross Alpha			⊗	
Gross Beta			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Carbamates and Urea Pesticides

Method: EPA 531.2

Instr: LC11

Batch ID: W4B2044

Preparation: _NONE (LC)

Prepared: 02/25/24 10:29

Analyst: cam

3-Hydroxycarbofuran	ND	0.82	2.0	ug/l	1	02/26/24	
Aldicarb	ND	0.58	2.0	ug/l	1	02/26/24	
Aldicarb sulfone	ND	0.73	2.0	ug/l	1	02/26/24	
Aldicarb sulfoxide	ND	1.0	2.0	ug/l	1	02/26/24	
Carbaryl	ND	1.0	2.0	ug/l	1	02/26/24	
Carbofuran	ND	1.0	2.0	ug/l	1	02/26/24	
Methiocarb	ND	1.0	2.0	ug/l	1	02/26/24	
Methomyl	ND	1.3	2.0	ug/l	1	02/26/24	
Oxamyl	ND	1.1	2.0	ug/l	1	02/26/24	
Propoxur (Baygon)	ND	1.4	2.0	ug/l	1	02/26/24	

Surrogate(s)

BDMC	120%	Conc: 12.0	70-130			02/26/24	
------	------	------------	--------	--	--	----------	--

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.4

Instr: GC08

Batch ID: W4B2149

Preparation: EPA 515.4/Micro Ext. Drtz

Prepared: 02/27/24 08:15

Analyst: alf

2,4,5-T	ND	0.065	0.20	ug/l	1	03/12/24	
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l	1	03/12/24	
2,4-D	ND	0.14	0.40	ug/l	1	03/12/24	
2,4-DB	ND	0.19	2.0	ug/l	1	03/12/24	
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l	1	03/12/24	
Acifluorfen	ND	0.030	0.40	ug/l	1	03/12/24	
Bentazon	ND	0.23	2.0	ug/l	1	03/12/24	
Dalapon	ND	0.11	0.40	ug/l	1	03/12/24	
DCPA	ND	0.029	0.10	ug/l	1	03/12/24	
Dicamba	ND	0.15	0.60	ug/l	1	03/12/24	
Dichloroprop	ND	0.12	0.30	ug/l	1	03/12/24	
Dinoseb	ND	0.033	0.40	ug/l	1	03/12/24	
Pentachlorophenol	ND	0.014	0.20	ug/l	1	03/12/24	
Picloram	ND	0.050	0.60	ug/l	1	03/12/24	

Surrogate(s)

2,4-DCAA	68%	Conc: 6.76	70-130			03/12/24	S-04
----------	-----	------------	--------	--	--	----------	------

Chlorinated Pesticides and/or PCBs by GC/ECD

Method: EPA 508.1

Instr: GC08

Batch ID: W4B2423

Preparation: EPA 508.1/SPE

Prepared: 02/29/24 08:34

Analyst: alf

4,4'-DDD	ND	0.0030	0.010	ug/l	1	03/06/24	
----------	----	--------	-------	------	---	----------	--

4B20133

Page 5 of 44

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1

Instr: GC08

Batch ID: W4B2423

Preparation: EPA 508.1/SPE

Prepared: 02/29/24 08:34

Analyst: alf

4,4'-DDE	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
4,4'-DDT	ND	0.0030	0.010	ug/l	1	03/06/24	
Aldrin	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
alpha-BHC	ND	0.0015	0.010	ug/l	1	03/06/24	
Aroclor 1016	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1221	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1232	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1242	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1248	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1254	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1260	ND	0.10	0.10	ug/l	1	03/06/24	Q-02
beta-BHC	ND	0.010	0.010	ug/l	1	03/06/24	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	03/06/24	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	03/06/24	
delta-BHC	ND	0.0030	0.010	ug/l	1	03/06/24	
Dieldrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endosulfan I	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endosulfan II	ND	0.0019	0.010	ug/l	1	03/06/24	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	03/06/24	
Heptachlor	ND	0.010	0.010	ug/l	1	03/06/24	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	03/06/24	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	03/06/24	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	03/06/24	
Methoxychlor	ND	0.0030	0.010	ug/l	1	03/06/24	
PCBs, Total	ND	0.10	0.50	ug/l	1	03/06/24	
Propachlor	ND	0.045	0.20	ug/l	1	03/06/24	
Toxaphene	ND	0.37	1.0	ug/l	1	03/06/24	
Trifluralin	ND	0.0043	0.010	ug/l	1	03/06/24	

Surrogate(s)

4,4-Dibromobiphenyl	82% Conc: 0.0788	70-130	03/06/24
---------------------	------------------	--------	----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

4B20133

Page 6 of 44

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: EPA 335.4			Instr: AA01				
Batch ID: W4B2277		Preparation: _NONE (WETCHEM)			Prepared: 02/27/24 19:14		Analyst: KAC
Cyanide, Total	ND	1.5	5.0	ug/l	1	02/28/24	
Diquat and Paraquat by EPA 549.2							
Method: EPA 549.2			Instr: LC10				
Batch ID: W4B1814		Preparation: EPA 549.2/SPE			Prepared: 02/22/24 08:48		Analyst: cam
Diquat	ND	1.2	4.0	ug/l	1	02/28/24	
Endothall By EPA 548.1							
Method: EPA 548.1			Instr: GCMS06				
Batch ID: W4B1800		Preparation: EPA 548.1/SPE			Prepared: 02/22/24 07:49		Analyst: rmr
Endothall	ND	11	45	ug/l	1	02/27/24	
Explosives by EPA Method 8330							
Method: EPA 8330A			Instr: LC10				
Batch ID: W4B1813		Preparation: Method (SPE)			Prepared: 02/23/24 08:46		Analyst: cam
1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l	1	03/13/24	
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l	1	03/13/24	
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l	1	03/13/24	
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l	1	03/13/24	
2-Nitrotoluene	ND	0.21	1.0	ug/l	1	03/13/24	
3-Nitrotoluene	ND	0.37	1.0	ug/l	1	03/13/24	
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l	1	03/13/24	
4-Nitrotoluene	ND	0.27	1.0	ug/l	1	03/13/24	
HMX	ND	0.30	1.0	ug/l	1	03/13/24	
Nitrobenzene	ND	0.16	1.0	ug/l	1	03/13/24	
RDX	ND	0.33	1.0	ug/l	1	03/13/24	
Tetryl	ND	0.45	1.0	ug/l	1	03/13/24	
Glyphosate by EPA 547							
Method: EPA 547			Instr: LC11				
Batch ID: W4B2068		Preparation: _NONE (LC)			Prepared: 02/26/24 08:52		Analyst: cam
Glyphosate	ND	1.8	5.0	ug/l	1	02/27/24	
Haloacetic Acids (HAAs) by GC/ECD							
Method: EPA 552.3			Instr: GC05				
Batch ID: W4B1637		Preparation: EPA 552.3/Micro Ext. Drtz			Prepared: 02/21/24 08:38		Analyst: ecs
Dibromoacetic acid (dbaa)	0.58	0.28	1.0	ug/l	1	03/05/24	J
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l	1	03/05/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Haloacetic Acids (HAAs) by GC/ECD (Continued)

Method: EPA 552.3		Instr: GC05					
Batch ID: W4B1637	Preparation: EPA 552.3/Micro Ext. Drtz	Prepared: 02/21/24 08:38	Analyst: ecs				
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l	1	03/05/24	
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l	1	03/05/24	
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l	1	03/05/24	
<i>Surrogate(s)</i>							
2-Bromobutyric acid	108%	Conc: 10.8	70-130			03/05/24	

Metals by EPA 200 Series Methods

Method: EPA 245.1		Instr: HG03					
Batch ID: W4B2302	Preparation: EPA 245.1	Prepared: 02/28/24 09:08	Analyst: kjo				
Mercury, Total	ND	0.037	0.050	ug/l	1	03/01/24	

Perchlorate by EPA 314.0

Method: EPA 314.0		Instr: LC08_Channel1					
Batch ID: W4B2296	Preparation: _NONE (LC)	Prepared: 02/28/24 08:43	Analyst: cam				
Perchlorate	ND	0.26	1.0	ug/l	1	02/28/24	

Radiological Parameters by APHA/EPA Methods

Method: EPA 900.0		Instr: RAD02					
Batch ID: W4C1302	Preparation: _NONE (RADIOCHEM)	Prepared: 03/16/24 14:25	Analyst: ela				
Gross Alpha	2.70			pCi/L	1	03/21/24	
Counting Uncertainty: 0.602	MDA: 0.828						
Gross Beta	2.91			pCi/L	1	03/21/24	
Counting Uncertainty: 0.814	MDA: 1.295						

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2		Instr: GCMS16					
Batch ID: W4B2424	Preparation: EPA 525.2/SPE	Prepared: 02/29/24 08:39	Analyst: rmr				
Alachlor	ND	0.063	0.10	ug/l	1	03/09/24	
Atrazine	ND	0.042	0.10	ug/l	1	03/09/24	
Benzo (a) pyrene	ND	0.045	0.10	ug/l	1	03/09/24	
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l	1	03/09/24	
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l	1	03/09/24	
Bromacil	ND	0.24	0.50	ug/l	1	03/09/24	
Butachlor	ND	0.040	0.10	ug/l	1	03/09/24	
Captan	ND	0.32	1.0	ug/l	1	03/09/24	
Chlorpropham	ND	0.040	0.10	ug/l	1	03/09/24	
Diazinon	ND	0.022	0.10	ug/l	1	03/09/24	
Dimethoate	ND	0.041	0.20	ug/l	1	03/09/24	
Diphenamid	ND	0.030	0.10	ug/l	1	03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Semivolatile Organic Compounds by GC/MS (Continued)

Method: EPA 525.2

Instr: GCMS16

Batch ID: W4B2424

Preparation: EPA 525.2/SPE

Prepared: 02/29/24 08:39

Analyst: rmr

Disulfoton	ND	0.11	0.20	ug/l	1	03/09/24	
EPTC	ND	0.020	0.10	ug/l	1	03/09/24	
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l	1	03/09/24	
Metolachlor	ND	0.030	0.10	ug/l	1	03/09/24	
Metribuzin	ND	0.030	0.10	ug/l	1	03/09/24	
Molinate	ND	0.030	0.10	ug/l	1	03/09/24	
Prometryn	ND	0.030	0.10	ug/l	1	03/09/24	
Simazine	ND	0.058	0.10	ug/l	1	03/09/24	
Terbacil	ND	0.090	2.0	ug/l	1	03/09/24	
Thiobencarb	ND	0.069	0.10	ug/l	1	03/09/24	
Trithion	ND	0.054	0.10	ug/l	1	03/09/24	

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	103%	Conc: 4.93	70-130			03/09/24	
Perylene-d12	78%	Conc: 3.76	50-120			03/09/24	
Triphenyl phosphate	70%	Conc: 3.36	70-130			03/09/24	

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 1613B

Instr: GCMS15

Batch ID: W4C0010

Preparation: EPA 3510C

Prepared: 03/01/24 07:56

Analyst: AJC

2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	1	03/05/24	
-----------------------	----	------	------	------	---	----------	--

Volatile Organics by P&T and GC/MS

Method: EPA 524.3

Instr: GCMS04

Batch ID: W4B2414

Preparation: Method (P+T)

Prepared: 02/29/24 07:37

Analyst: ADM

1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l	1	02/29/24	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	106%	Conc: 0.425	70-130			02/29/24	
4-Bromofluorobenzene	104%	Conc: 0.414	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 14:35 by Brown & Caldwell

4B20133-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Aldehydes and Carbonyl Compounds by GC/ECD							
Method: EPA 556				Instr: GC08			
Batch ID: W4B1809	Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08		
Formaldehyde	12	0.86	2.0	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
2,4,5-TFAP	86%	Conc: 17.2	70-130			03/02/24	
Glycols by GC/FID							
Method: EPA 8015B				Instr: GC09			
Batch ID: W4B1920	Preparation: _NONE (SVOC)		Prepared: 02/22/24 16:00		Analyst: alf		
Ethylene glycol	ND	4.7	10	mg/l	1	02/22/24	
<i>Surrogate(s)</i>							
1-Propanol	104%	Conc: 104	50-150			02/22/24	
Nitrosamines by CI GC/MS/MS, EPA 521							
Method: EPA 521				Instr: GCMS09			
Batch ID: W4B2292	Preparation: EPA 521/SPE		Prepared: 02/28/24 08:07		Analyst: mld		
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l	1	03/05/24	
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l	1	03/05/24	
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l	1	03/05/24	
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l	1	03/05/24	
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l	1	03/05/24	
N-Nitrosomorpholine	ND	0.68	2.0	ng/l	1	03/05/24	
N-Nitrosopiperidine	ND	0.65	2.0	ng/l	1	03/05/24	
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l	1	03/05/24	
<i>Surrogate(s)</i>							
NDMA-d6	94%	Conc: 23.6	70-130			03/05/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 533				Instr: LCMS06			
Batch ID: W4C0700	Preparation: EPA 533/SPE		Prepared: 03/08/24 11:59		Analyst: rjr		
11CI-PF3OUdS	ND	0.76	1.7	ng/l	1	03/12/24	
4:2 FTS	ND	0.71	1.7	ng/l	1	03/12/24	
6:2 FTS	ND	0.67	1.7	ng/l	1	03/12/24	
8:2 FTS	ND	0.58	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.72	1.7	ng/l	1	03/12/24	
ADONA	ND	0.61	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.79	1.7	ng/l	1	03/12/24	
NFDHA	ND	0.64	1.7	ng/l	1	03/12/24	
PFBA	ND	0.52	1.7	ng/l	1	03/12/24	
PFBS	ND	0.39	1.7	ng/l	1	03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 14:35 by Brown & Caldwell

4B20133-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0700

Preparation: EPA 533/SPE

Prepared: 03/08/24 11:59

Analyst: rjr

PFDA	ND	0.55	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFEESA	ND	0.39	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpS	ND	0.51	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.62	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.85	1.7	ng/l	1	03/12/24	
PFMBA	ND	0.53	1.7	ng/l	1	03/12/24	
PFMPA	ND	0.36	1.7	ng/l	1	03/12/24	
PFNA	ND	0.75	1.7	ng/l	1	03/12/24	
PFOA	ND	0.79	1.7	ng/l	1	03/12/24	
PFOS	ND	0.58	1.7	ng/l	1	03/12/24	
PFPeA	ND	0.38	1.7	ng/l	1	03/12/24	
PFPeS	ND	0.43	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.51	1.7	ng/l	1	03/12/24	

Surrogate(s)

13C2-4:2 FTS	96%	Conc: 32.9	50-200			03/12/24	
13C2-6:2 FTS	96%	Conc: 32.9	50-200			03/12/24	
13C2-8:2 FTS	98%	Conc: 33.6	50-200			03/12/24	
13C2-PFDoA	99%	Conc: 8.44	50-200			03/12/24	
13C3-PFBS	111%	Conc: 9.47	50-200			03/12/24	
13C3-PFHxS	106%	Conc: 9.09	50-200			03/12/24	
13C4-PFBA	109%	Conc: 9.30	50-200			03/12/24	
13C4-PFHpA	102%	Conc: 8.70	50-200			03/12/24	
13C5-PFHxA	104%	Conc: 8.87	50-200			03/12/24	
13C5-PFPeA	110%	Conc: 9.38	50-200			03/12/24	
13C6-PFDA	100%	Conc: 8.60	50-200			03/12/24	
13C7-PFUnA	100%	Conc: 8.54	50-200			03/12/24	
13C8-PFOA	100%	Conc: 8.57	50-200			03/12/24	
13C8-PFOS	109%	Conc: 9.35	50-200			03/12/24	
13C9-PFNA	102%	Conc: 8.71	50-200			03/12/24	
HFPO-DA-13C3	95%	Conc: 8.11	50-200			03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 0:00 by Brown & Caldwell

4B20133-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0700

Preparation: EPA 533/SPE

Prepared: 03/08/24 11:59

Analyst: rjr

11CI-PF3OUdS	ND	0.70	1.6	ng/l	1	03/12/24	
4:2 FTS	ND	0.66	1.6	ng/l	1	03/12/24	
6:2 FTS	ND	0.62	1.6	ng/l	1	03/12/24	
8:2 FTS	ND	0.54	1.6	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.67	1.6	ng/l	1	03/12/24	
ADONA	ND	0.56	1.6	ng/l	1	03/12/24	
HFPO-DA	ND	0.73	1.6	ng/l	1	03/12/24	
NFDHA	ND	0.59	1.6	ng/l	1	03/12/24	
PFBA	ND	0.48	1.6	ng/l	1	03/12/24	
PFBS	ND	0.37	1.6	ng/l	1	03/12/24	
PFDA	ND	0.51	1.6	ng/l	1	03/12/24	
PFDoA	ND	0.52	1.6	ng/l	1	03/12/24	
PFEESA	ND	0.36	1.6	ng/l	1	03/12/24	
PFHpA	ND	0.52	1.6	ng/l	1	03/12/24	
PFHpS	ND	0.48	1.6	ng/l	1	03/12/24	
PFHxA	ND	0.57	1.6	ng/l	1	03/12/24	
PFHxS	ND	0.79	1.6	ng/l	1	03/12/24	
PFMBA	ND	0.49	1.6	ng/l	1	03/12/24	
PFMPA	ND	0.33	1.6	ng/l	1	03/12/24	
PFNA	ND	0.70	1.6	ng/l	1	03/12/24	
PFOA	ND	0.73	1.6	ng/l	1	03/12/24	
PFOS	ND	0.54	1.6	ng/l	1	03/12/24	
PFPeA	ND	0.36	1.6	ng/l	1	03/12/24	
PFPeS	ND	0.40	1.6	ng/l	1	03/12/24	
PFUnA	ND	0.47	1.6	ng/l	1	03/12/24	

Surrogate(s)

13C2-4:2 FTS	104%	Conc: 32.9	50-200	03/12/24
13C2-6:2 FTS	101%	Conc: 32.1	50-200	03/12/24
13C2-8:2 FTS	102%	Conc: 32.5	50-200	03/12/24
13C2-PFDoA	105%	Conc: 8.32	50-200	03/12/24
13C3-PFBS	116%	Conc: 9.22	50-200	03/12/24
13C3-PFHxS	111%	Conc: 8.78	50-200	03/12/24
13C4-PFBA	111%	Conc: 8.82	50-200	03/12/24
13C4-PFHpA	109%	Conc: 8.63	50-200	03/12/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 0:00 by Brown & Caldwell

4B20133-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0700		Preparation: EPA 533/SPE		Prepared: 03/08/24 11:59		Analyst: rjr	
13C5-PFHxA	114%	Conc: 9.01	50-200			03/12/24	
13C5-PFPeA	111%	Conc: 8.79	50-200			03/12/24	
13C6-PFDA	110%	Conc: 8.77	50-200			03/12/24	
13C7-PFUnA	109%	Conc: 8.63	50-200			03/12/24	
13C8-PFOA	107%	Conc: 8.49	50-200			03/12/24	
13C8-PFOS	108%	Conc: 8.60	50-200			03/12/24	
13C9-PFNA	109%	Conc: 8.62	50-200			03/12/24	
HFPO-DA-13C3	109%	Conc: 8.62	50-200			03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 0:00 by Brown & Caldwell

4B20133-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0700

Preparation: EPA 533/SPE

Prepared: 03/08/24 11:59

Analyst: rjr

11CI-PF3OUdS	ND	0.72	1.6	ng/l	1	03/12/24	
4:2 FTS	ND	0.67	1.6	ng/l	1	03/12/24	
6:2 FTS	ND	0.63	1.6	ng/l	1	03/12/24	
8:2 FTS	ND	0.55	1.6	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.68	1.6	ng/l	1	03/12/24	
ADONA	ND	0.58	1.6	ng/l	1	03/12/24	
HFPO-DA	ND	0.75	1.6	ng/l	1	03/12/24	
NFDHA	ND	0.61	1.6	ng/l	1	03/12/24	
PFBA	ND	0.49	1.6	ng/l	1	03/12/24	
PFBS	ND	0.37	1.6	ng/l	1	03/12/24	
PFDA	ND	0.52	1.6	ng/l	1	03/12/24	
PFDoA	ND	0.53	1.6	ng/l	1	03/12/24	
PFEESA	ND	0.37	1.6	ng/l	1	03/12/24	
PFHpA	ND	0.53	1.6	ng/l	1	03/12/24	
PFHpS	ND	0.49	1.6	ng/l	1	03/12/24	
PFHxA	ND	0.58	1.6	ng/l	1	03/12/24	
PFHxS	ND	0.81	1.6	ng/l	1	03/12/24	
PFMBA	ND	0.50	1.6	ng/l	1	03/12/24	
PFMPA	ND	0.34	1.6	ng/l	1	03/12/24	
PFNA	ND	0.71	1.6	ng/l	1	03/12/24	
PFOA	ND	0.75	1.6	ng/l	1	03/12/24	
PFOS	ND	0.55	1.6	ng/l	1	03/12/24	
PFPeA	ND	0.36	1.6	ng/l	1	03/12/24	
PFPeS	ND	0.40	1.6	ng/l	1	03/12/24	
PFUnA	ND	0.48	1.6	ng/l	1	03/12/24	

Surrogate(s)

13C2-4:2 FTS	105%	Conc: 34.2	50-200	03/12/24
13C2-6:2 FTS	101%	Conc: 32.9	50-200	03/12/24
13C2-8:2 FTS	102%	Conc: 33.2	50-200	03/12/24
13C2-PFDoA	105%	Conc: 8.52	50-200	03/12/24
13C3-PFBS	115%	Conc: 9.34	50-200	03/12/24
13C3-PFHxS	112%	Conc: 9.06	50-200	03/12/24
13C4-PFBA	112%	Conc: 9.07	50-200	03/12/24
13C4-PFHpA	103%	Conc: 8.36	50-200	03/12/24

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 0:00 by Brown & Caldwell

4B20133-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0700		Preparation: EPA 533/SPE		Prepared: 03/08/24 11:59		Analyst: rjr	
13C5-PFHxA	106%	Conc: 8.64	50-200			03/12/24	
13C5-PFPeA	113%	Conc: 9.14	50-200			03/12/24	
13C6-PFDA	104%	Conc: 8.43	50-200			03/12/24	
13C7-PFUnA	104%	Conc: 8.47	50-200			03/12/24	
13C8-PFOA	106%	Conc: 8.63	50-200			03/12/24	
13C8-PFOS	114%	Conc: 9.22	50-200			03/12/24	
13C9-PFNA	104%	Conc: 8.46	50-200			03/12/24	
HFPO-DA-13C3	98%	Conc: 7.95	50-200			03/12/24	

Sample Results GEL Laboratories, LLC

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
EPA 903.1							
Method: EPA 903.1		Batch ID: 2575902		Prepared: 03/19/24 00:00		Analyst: MJ2	
Radium-226	0.137			pCi/L	1	03/19/24	U
Uncertainty: 0.149		MDA: 0.234					
EPA 904.0/ EPA 9320							
Method: EPA 904.0/ EPA 9320		Batch ID: 2586630		Prepared: 03/28/24 00:00		Analyst: JE1	
Radium-228	0.419			pCi/L	1	03/28/24	U
Uncertainty: 0.480		MDA: 0.805					
<i>Surrogate(s)</i>							
Barium Carrier	95.5%		25-125			03/28/24	
Yttrium Carrier	65.5%		25-125			03/28/24	
EPA 905.0							
Method: EPA 905.0		Batch ID: 2573130		Prepared: 02/29/24 00:00		Analyst: ST2	
Strontium-90	-0.370			pCi/L	1	02/29/24	U
Uncertainty: 0.672		MDA: 1.49					
<i>Surrogate(s)</i>							
Strontium Carrier	80.3%		25-125			02/29/24	
EPA 906.0							
Method: EPA 906.0		Batch ID: 2573168		Prepared: 03/07/24 00:00		Analyst: HB2	
Tritium	387			pCi/L	1	03/07/24	U
Uncertainty: 371		MDA: 619					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

EPA 903.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2575902 - EPA 903.1										
Blank (1205664148-BLK)										
Radium-226	0.0504	1.00	pCi/L			-				U
Uncertainty: 0.140		MDA: 0.279								
Duplicate (1205664149 D)										
Radium-226	0.0650	1.00	pCi/L		<	0-20	0	20		U
Uncertainty: 0.0919		MDA: 0.152								
Matrix Spike (1205664150 S)										
Radium-226	12.1	1.00	pCi/L	14.4	<	84.2	80-120			
Uncertainty: 1.03		MDA: 0.196								
BS (1205664151-BKS)										
Radium-226	14.9	1.00	pCi/L	14.4		104	90-110			
Uncertainty: 1.43		MDA: 0.249								

Quality Control Results

EPA 904.0/ EPA 9320

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2586630 - EPA 904.0/ EPA 9320										
Blank (1205684964-BLK)										
Radium-228	0.242	1.00	pCi/L			-				U
Uncertainty: 0.251		MDA: 0.416								
Duplicate (1205684965 D)										
Radium-228	0.461	1.00	pCi/L		<	0-20	0	20		U
Uncertainty: 0.378		MDA: 0.609								
Matrix Spike (1205684966 S)										
Radium-228	12.3	1.00	pCi/L	16.6	<	74.3	70-130			
Uncertainty: 0.957		MDA: 0.511								
BS (1205684967-BKS)										
Radium-228	2.70	1.00	pCi/L	3.32		81.5	80-120			
Uncertainty: 0.642		MDA: 0.792								

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

EPA 905.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573130 - EPA 905.0										
Blank (1205659369-BLK) Prepared & Analyzed: 02/29/24										
Strontium-90	0.527	2.00	pCi/L			-				U
Uncertainty: 0.935		MDA: 1.63								
Duplicate (1205659370 D) Source: 656533001 Prepared & Analyzed: 02/29/24										
Strontium-90	-0.122	2.00	pCi/L		<	0-20	0	20		U
Uncertainty: 0.774		MDA: 1.54								
Matrix Spike (1205659371 S) Source: 656533001 Prepared & Analyzed: 02/29/24										
Strontium-90	34.3	2.00	pCi/L	29.1	<	118	80-120			
Uncertainty: 3.39		MDA: 2.60								
BS (1205659372-BKS) Prepared & Analyzed: 02/29/24										
Strontium-90	6.05	2.00	pCi/L	5.58		108	90-110			
Uncertainty: 1.53		MDA: 1.83								

Quality Control Results (Continued)

EPA 906.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573168 - EPA 906.0										
Blank (1205659461-BLK) Prepared & Analyzed: 03/07/24										
Tritium	33.7	1000	pCi/L			-				U
Uncertainty: 355		MDA: 620								
Duplicate (1205659462 D) Source: 655486001 Prepared & Analyzed: 03/07/24										
Tritium	33.2	1000	pCi/L		<	0-20	0	20		U
Uncertainty: 356		MDA: 623								
Matrix Spike (1205659463 S) Source: 655486001 Prepared & Analyzed: 03/07/24										
Tritium	10500	1000	pCi/L	12000	<	87.8	80-120			
Uncertainty: 1310		MDA: 1540								
BS (1205659464-BKS) Prepared & Analyzed: 03/11/24										
Tritium	4850	1000	pCi/L	4830		100	90-110			
Uncertainty: 623		MDA: 702								

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Aldehydes and Carbonyl Compounds by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1809 - EPA 556										
Blank (W4B1809-BLK1)										
Formaldehyde	ND	0.86	2.0	ug/l						
<i>Surrogate(s)</i>										
2,4,5-TFAP	21.5			ug/l	20.0		108 70-130			
LCS (W4B1809-BS1)										
Formaldehyde	15.0	0.86	2.0	ug/l	20.0		75 70-130			
<i>Surrogate(s)</i>										
2,4,5-TFAP	23.3			ug/l	20.0		117 70-130			
LCS Dup (W4B1809-BSD1)										
Formaldehyde	15.7	0.86	2.0	ug/l	20.0		78 70-130	4	30	
<i>Surrogate(s)</i>										
2,4,5-TFAP	21.6			ug/l	20.0		108 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2										
Blank (W4B2044-BLK1)					Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l						
Aldicarb	ND	0.58	2.0	ug/l						
Aldicarb sulfone	ND	0.73	2.0	ug/l						
Aldicarb sulfoxide	ND	1.0	2.0	ug/l						
Carbaryl	ND	1.0	2.0	ug/l						
Carbofuran	ND	1.0	2.0	ug/l						
Methiocarb	ND	1.0	2.0	ug/l						
Methomyl	ND	1.3	2.0	ug/l						
Oxamyl	ND	1.1	2.0	ug/l						
Propoxur (Baygon)	ND	1.4	2.0	ug/l						
<i>Surrogate(s)</i>										
BDMC	10.6			ug/l	10.0		106 70-130			
LCS (W4B2044-BS1)					Prepared: 02/25/24 Analyzed: 02/26/24					
3-Hydroxycarbofuran	11.0	0.82	2.0	ug/l	10.0		110 70-130			
Aldicarb	10.8	0.58	2.0	ug/l	10.0		108 70-130			
Aldicarb sulfone	8.12	0.73	2.0	ug/l	10.0		81 70-130			
Aldicarb sulfoxide	11.3	1.0	2.0	ug/l	10.0		113 70-130			
Carbaryl	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Carbofuran	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Methiocarb	12.6	1.0	2.0	ug/l	10.0		126 70-130			
Methomyl	9.30	1.3	2.0	ug/l	10.0		93 70-130			
Oxamyl	8.16	1.1	2.0	ug/l	10.0		82 70-130			
Propoxur (Baygon)	11.6	1.4	2.0	ug/l	10.0		116 70-130			
<i>Surrogate(s)</i>										
BDMC	12.6			ug/l	10.0		126 70-130			
Matrix Spike (W4B2044-MS1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.5	0.82	2.0	ug/l	10.0	ND	125 70-130			
Aldicarb	12.9	0.58	2.0	ug/l	10.0	ND	129 70-130			
Aldicarb sulfone	9.57	0.73	2.0	ug/l	10.0	ND	96 70-130			
Aldicarb sulfoxide	12.2	1.0	2.0	ug/l	10.0	ND	122 70-130			
Carbaryl	12.4	1.0	2.0	ug/l	10.0	ND	124 70-130			
Carbofuran	11.0	1.0	2.0	ug/l	10.0	ND	110 70-130			
Methiocarb	13.0	1.0	2.0	ug/l	10.0	ND	130 70-130			
Methomyl	10.8	1.3	2.0	ug/l	10.0	ND	108 70-130			
Oxamyl	10.8	1.1	2.0	ug/l	10.0	ND	108 70-130			
Propoxur (Baygon)	12.1	1.4	2.0	ug/l	10.0	ND	121 70-130			
<i>Surrogate(s)</i>										
BDMC	11.8			ug/l	10.0		118 70-130			
Matrix Spike Dup (W4B2044-MSD1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.1	0.82	2.0	ug/l	10.0	ND	121 70-130	3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Carbamates and Urea Pesticides (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2 (Continued)											
Matrix Spike Dup (W4B2044-MSD1)			Source: 3L04005-04			Prepared & Analyzed: 02/25/24					
Aldicarb	11.8	0.58	2.0	ug/l	10.0	ND	118	70-130	9	30	
Aldicarb sulfone	9.24	0.73	2.0	ug/l	10.0	ND	92	70-130	4	30	
Aldicarb sulfoxide	14.0	1.0	2.0	ug/l	10.0	ND	140	70-130	13	30	MS-01
Carbaryl	11.4	1.0	2.0	ug/l	10.0	ND	114	70-130	8	30	
Carbofuran	11.6	1.0	2.0	ug/l	10.0	ND	116	70-130	5	30	
Methiocarb	12.3	1.0	2.0	ug/l	10.0	ND	123	70-130	5	30	
Methomyl	10.7	1.3	2.0	ug/l	10.0	ND	107	70-130	1	30	
Oxamyl	10.6	1.1	2.0	ug/l	10.0	ND	106	70-130	2	30	
Propoxur (Baygon)	12.2	1.4	2.0	ug/l	10.0	ND	122	70-130	1	30	
<i>Surrogate(s)</i>											
BDMC	12.7			ug/l	10.0		127	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2149 - EPA 515.4											
Blank (W4B2149-BLK1)						Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	ND	0.065	0.20	ug/l							
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l							
2,4-D	ND	0.14	0.40	ug/l							
2,4-DB	0.233	0.19	2.0	ug/l							B-02, J
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l							
Acifluorfen	ND	0.030	0.40	ug/l							
Bentazon	ND	0.23	2.0	ug/l							
Dalapon	ND	0.11	0.40	ug/l							
DCPA	0.0458	0.029	0.10	ug/l							B-02, J
Dicamba	ND	0.15	0.60	ug/l							
Dichloroprop	ND	0.12	0.30	ug/l							
Dinoseb	ND	0.033	0.40	ug/l							
Pentachlorophenol	ND	0.014	0.20	ug/l							
Picloram	ND	0.050	0.60	ug/l							
<i>Surrogate(s)</i>											
2,4-DCAA	9.53			ug/l	10.0		95	70-130			
LCS (W4B2149-BS1)											
Prepared: 02/27/24 Analyzed: 03/12/24											
2,4,5-T	4.22	0.065	0.20	ug/l	4.00		106	70-130			
2,4,5-TP (Silvex)	4.19	0.026	0.20	ug/l	4.00		105	70-130			
2,4-D	8.44	0.14	0.40	ug/l	8.00		106	70-130			
2,4-DB	15.8	0.19	2.0	ug/l	16.0		99	70-130			
3,5-Dichlorobenzoic acid	8.45	0.12	1.0	ug/l	8.00		106	70-130			
Acifluorfen	4.15	0.030	0.40	ug/l	4.00		104	70-130			
Bentazon	16.2	0.23	2.0	ug/l	16.0		101	70-130			
Dalapon	8.26	0.11	0.40	ug/l	8.00		103	70-130			
DCPA	4.74	0.029	0.10	ug/l	4.00		119	70-130			
Dicamba	8.32	0.15	0.60	ug/l	8.00		104	70-130			
Dichloroprop	8.44	0.12	0.30	ug/l	8.00		105	70-130			
Dinoseb	4.25	0.033	0.40	ug/l	4.00		106	70-130			
Pentachlorophenol	4.24	0.014	0.20	ug/l	4.00		106	70-130			
Picloram	4.17	0.050	0.60	ug/l	4.00		104	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.5			ug/l	10.0		105	70-130			
Matrix Spike (W4B2149-MS1)											
Source: 4B15126-01				Prepared: 02/27/24 Analyzed: 03/12/24							
2,4,5-T	4.30	0.065	0.20	ug/l	4.00	ND	108	70-130			
2,4,5-TP (Silvex)	4.15	0.026	0.20	ug/l	4.00	ND	104	70-130			
2,4-D	8.41	0.14	0.40	ug/l	8.00	ND	105	70-130			
2,4-DB	16.5	0.19	2.0	ug/l	16.0	ND	103	70-130			
3,5-Dichlorobenzoic acid	8.22	0.12	1.0	ug/l	8.00	ND	103	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2149 - EPA 515.4 (Continued)											
Matrix Spike (W4B2149-MS1) Source: 4B15126-01 Prepared: 02/27/24 Analyzed: 03/12/24											
Acifluorfen	4.22	0.030	0.40	ug/l	4.00	ND	105	70-130			
Bentazon	16.9	0.23	2.0	ug/l	16.0	ND	105	70-130			
Dalapon	8.38	0.11	0.40	ug/l	8.00	ND	105	70-130			
DCPA	5.25	0.029	0.10	ug/l	4.00	ND	131	70-130			MS-01
Dicamba	8.25	0.15	0.60	ug/l	8.00	ND	103	70-130			
Dichloroprop	8.27	0.12	0.30	ug/l	8.00	ND	103	70-130			
Dinoseb	4.18	0.033	0.40	ug/l	4.00	ND	105	70-130			
Pentachlorophenol	4.17	0.014	0.20	ug/l	4.00	ND	104	70-130			
Picloram	4.33	0.050	0.60	ug/l	4.00	ND	108	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.3			ug/l	10.0		103	70-130			
Matrix Spike Dup (W4B2149-MSD1) Source: 4B15126-01 Prepared: 02/27/24 Analyzed: 03/12/24											
2,4,5-T	4.24	0.065	0.20	ug/l	4.00	ND	106	70-130	1	30	
2,4,5-TP (Silvex)	4.24	0.026	0.20	ug/l	4.00	ND	106	70-130	2	30	
2,4-D	8.48	0.14	0.40	ug/l	8.00	ND	106	70-130	0.8	30	
2,4-DB	15.8	0.19	2.0	ug/l	16.0	ND	98	70-130	5	30	
3,5-Dichlorobenzoic acid	8.47	0.12	1.0	ug/l	8.00	ND	106	70-130	3	30	
Acifluorfen	4.21	0.030	0.40	ug/l	4.00	ND	105	70-130	0.2	30	
Bentazon	16.6	0.23	2.0	ug/l	16.0	ND	103	70-130	2	30	
Dalapon	8.27	0.11	0.40	ug/l	8.00	ND	103	70-130	1	30	
DCPA	5.35	0.029	0.10	ug/l	4.00	ND	134	70-130	2	30	MS-01
Dicamba	8.44	0.15	0.60	ug/l	8.00	ND	105	70-130	2	30	
Dichloroprop	8.44	0.12	0.30	ug/l	8.00	ND	105	70-130	2	30	
Dinoseb	4.20	0.033	0.40	ug/l	4.00	ND	105	70-130	0.5	30	
Pentachlorophenol	4.26	0.014	0.20	ug/l	4.00	ND	107	70-130	2	30	
Picloram	4.23	0.050	0.60	ug/l	4.00	ND	106	70-130	2	30	
<i>Surrogate(s)</i>											
2,4-DCAA	10.6			ug/l	10.0		106	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1									
Blank (W4B2423-BLK1)					Prepared: 02/29/24 Analyzed: 03/05/24				
4,4'-DDD	ND	0.0030	0.010	ug/l					
4,4'-DDE	ND	0.0040	0.010	ug/l					
4,4'-DDT	ND	0.0030	0.010	ug/l					
Aldrin	ND	0.0040	0.010	ug/l					
alpha-BHC	ND	0.0015	0.010	ug/l					
Aroclor 1016	ND	0.048	0.10	ug/l					
Aroclor 1221	ND	0.044	0.10	ug/l					
Aroclor 1232	ND	0.064	0.10	ug/l					
Aroclor 1242	ND	0.070	0.10	ug/l					
Aroclor 1248	ND	0.049	0.10	ug/l					
Aroclor 1254	ND	0.068	0.10	ug/l					
Aroclor 1260	ND	0.076	0.10	ug/l					
beta-BHC	ND	0.0045	0.010	ug/l					
Chlordane (tech)	ND	0.067	0.10	ug/l					
Chlorothalonil	ND	0.0040	0.050	ug/l					
delta-BHC	ND	0.0030	0.010	ug/l					
Dieldrin	ND	0.0030	0.010	ug/l					
Endosulfan I	ND	0.0030	0.010	ug/l					
Endosulfan II	ND	0.0019	0.010	ug/l					
Endosulfan sulfate	ND	0.0030	0.010	ug/l					
Endrin	ND	0.0030	0.010	ug/l					
Endrin aldehyde	ND	0.0040	0.010	ug/l					
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l					
Heptachlor	ND	0.0031	0.010	ug/l					
Heptachlor epoxide	ND	0.0019	0.010	ug/l					
Hexachlorobenzene	ND	0.0019	0.050	ug/l					
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l					
Methoxychlor	ND	0.0030	0.010	ug/l					
PCBs, Total	ND	0.048	0.50	ug/l					
Propachlor	ND	0.045	0.20	ug/l					
Toxaphene	ND	0.37	1.0	ug/l					
Trifluralin	ND	0.0043	0.010	ug/l					
<i>Surrogate(s)</i>									
4,4-Dibromobiphenyl	0.0981			ug/l	0.100		98 70-130		
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24				
4,4'-DDD	0.0759	0.0030	0.010	ug/l	0.100		76 70-130		
4,4'-DDE	0.0595	0.0040	0.010	ug/l	0.100		60 70-130		Q-02
4,4'-DDT	0.112	0.0030	0.010	ug/l	0.100		112 70-130		
Aldrin	0.0182	0.0040	0.010	ug/l	0.100		18 50-130		Q-02

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1 (Continued)										
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
alpha-BHC	0.0815	0.0015	0.010	ug/l	0.100		82 70-130			
beta-BHC	0.0856	0.0045	0.010	ug/l	0.100		86 70-130			
delta-BHC	0.0950	0.0030	0.010	ug/l	0.100		95 70-130			
Dieldrin	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
Endosulfan I	0.0679	0.0030	0.010	ug/l	0.100		68 70-130			BS-04
Endosulfan II	0.0729	0.0019	0.010	ug/l	0.100		73 70-130			
Endosulfan sulfate	0.0617	0.0030	0.010	ug/l	0.100		62 70-130			BS-04
Endrin	0.0936	0.0030	0.010	ug/l	0.100		94 70-130			
Endrin aldehyde	0.0464	0.0040	0.010	ug/l	0.100		46 70-130			Q-02
gamma-BHC (Lindane)	0.0843	0.0030	0.010	ug/l	0.100		84 70-130			
Heptachlor	0.0785	0.0031	0.010	ug/l	0.100		78 70-130			
Heptachlor epoxide	0.0847	0.0019	0.010	ug/l	0.100		85 70-130			
Methoxychlor	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0697			ug/l	0.100		70 70-130			
LCS (W4B2423-BS2)					Prepared: 02/29/24 Analyzed: 03/05/24					
Aroclor 1016	0.901	0.048	0.10	ug/l	1.00		90 70-130			
Aroclor 1260	0.620	0.076	0.10	ug/l	1.00		62 70-130			Q-02
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0795			ug/l	0.100		79 70-130			
LCS Dup (W4B2423-BSD1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	0.0889	0.0030	0.010	ug/l	0.100		89 70-130	16	30	
4,4'-DDE	0.0670	0.0040	0.010	ug/l	0.100		67 70-130	12	30	Q-02
4,4'-DDT	0.130	0.0030	0.010	ug/l	0.100		130 70-130	14	30	
Aldrin	0.0208	0.0040	0.010	ug/l	0.100		21 50-130	13	30	Q-02
alpha-BHC	0.0961	0.0015	0.010	ug/l	0.100		96 70-130	16	30	
beta-BHC	0.101	0.0045	0.010	ug/l	0.100		101 70-130	17	30	
delta-BHC	0.111	0.0030	0.010	ug/l	0.100		111 70-130	16	30	
Dieldrin	0.0902	0.0030	0.010	ug/l	0.100		90 70-130	17	30	
Endosulfan I	0.0798	0.0030	0.010	ug/l	0.100		80 70-130	16	30	
Endosulfan II	0.0839	0.0019	0.010	ug/l	0.100		84 70-130	14	30	
Endosulfan sulfate	0.0748	0.0030	0.010	ug/l	0.100		75 70-130	19	30	
Endrin	0.107	0.0030	0.010	ug/l	0.100		107 70-130	13	30	
Endrin aldehyde	0.0465	0.0040	0.010	ug/l	0.100		46 70-130	0.3	30	Q-02
gamma-BHC (Lindane)	0.0987	0.0030	0.010	ug/l	0.100		99 70-130	16	30	
Heptachlor	0.0931	0.0031	0.010	ug/l	0.100		93 70-130	17	30	
Heptachlor epoxide	0.0991	0.0019	0.010	ug/l	0.100		99 70-130	16	30	
Methoxychlor	0.0944	0.0030	0.010	ug/l	0.100		94 70-130	21	30	
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0972			ug/l	0.100		97 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B2277 - EPA 335.4											
Blank (W4B2277-BLK1)											
Cyanide, Total	ND	1.5	5.0	ug/l							
LCS (W4B2277-BS1)											
Cyanide, Total	94.9	1.5	5.0	ug/l	100		95	90-110			
Matrix Spike (W4B2277-MS1)											
Cyanide, Total	212	1.5	5.0	ug/l	200	ND	106	90-110			
Matrix Spike Dup (W4B2277-MSD1)											
Cyanide, Total	218	1.5	5.0	ug/l	200	ND	109	90-110	3	20	

Quality Control Results

(Continued)

Diquat and Paraquat by EPA 549.2

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1814 - EPA 549.2											
Blank (W4B1814-BLK1)											
Diquat	ND	1.2	4.0	ug/l							
LCS (W4B1814-BS1)											
Diquat	20.1	1.2	4.0	ug/l	20.0		101	70-130			
Matrix Spike (W4B1814-MS1)											
Diquat	20.6	1.2	4.0	ug/l	20.0	ND	103	46-122			
Matrix Spike Dup (W4B1814-MSD1)											
Diquat	19.8	1.2	4.0	ug/l	20.0	ND	99	46-122	4	30	

Quality Control Results

(Continued)

Endothall By EPA 548.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1800 - EPA 548.1											
Blank (W4B1800-BLK1)											
Endothall	ND	11	45	ug/l							
LCS (W4B1800-BS1)											
Endothall	99.5	11	45	ug/l	100		99	80-120			
Matrix Spike (W4B1800-MS1)											
Endothall	37.1	22	90	ug/l	200	ND	19	0.1-109			J
Matrix Spike Dup (W4B1800-MSD1)											
Endothall	32.4	22	90	ug/l	200	ND	16	0.1-109	14	30	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Explosives by EPA Method 8330

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1813 - EPA 8330A											
Blank (W4B1813-BLK1)						Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l							
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l							
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l							
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l							
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l							
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l							
2-Nitrotoluene	ND	0.21	1.0	ug/l							
3-Nitrotoluene	ND	0.37	1.0	ug/l							
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l							
4-Nitrotoluene	ND	0.27	1.0	ug/l							
HMX	ND	0.30	1.0	ug/l							
Nitrobenzene	ND	0.16	1.0	ug/l							
RDX	ND	0.33	1.0	ug/l							
Tetryl	ND	0.45	1.0	ug/l							
LCS (W4B1813-BS1)											
Prepared: 02/22/24 Analyzed: 03/13/24											
1,3,5-Trinitrobenzene	2.83	0.31	1.0	ug/l	2.50	113		70-130			
1,3-Dinitrobenzene	2.69	0.15	1.0	ug/l	2.50	107		70-130			
2,4,6-Trinitrotoluene	2.93	0.34	1.0	ug/l	2.50	117		70-130			
2,4-Dinitrotoluene	2.56	0.34	1.0	ug/l	2.50	102		70-130			
2,6-Dinitrotoluene	2.52	0.20	1.0	ug/l	2.50	101		70-130			
2-Amino-4,6-Dinitrotoluene	2.62	0.35	1.0	ug/l	2.50	105		70-130			
2-Nitrotoluene	2.08	0.21	1.0	ug/l	2.50	83		70-130			
3-Nitrotoluene	2.04	0.37	1.0	ug/l	2.50	82		70-130			
4-Amino-2,6-Dinitrotoluene	2.83	0.17	1.0	ug/l	2.50	113		70-130			
4-Nitrotoluene	2.13	0.27	1.0	ug/l	2.50	85		70-130			
HMX	2.81	0.30	1.0	ug/l	2.50	112		70-130			
Nitrobenzene	2.28	0.16	1.0	ug/l	2.50	91		70-130			
RDX	2.86	0.33	1.0	ug/l	2.50	114		70-130			
Tetryl	2.50	0.45	1.0	ug/l	2.50	100		70-130			
LCS Dup (W4B1813-BSD1)											
Prepared: 02/22/24 Analyzed: 03/13/24											
1,3,5-Trinitrobenzene	2.58	0.31	1.0	ug/l	2.50	103		70-130	9	25	
1,3-Dinitrobenzene	2.44	0.15	1.0	ug/l	2.50	98		70-130	10	25	
2,4,6-Trinitrotoluene	2.65	0.34	1.0	ug/l	2.50	106		70-130	10	25	
2,4-Dinitrotoluene	2.35	0.34	1.0	ug/l	2.50	94		70-130	9	25	
2,6-Dinitrotoluene	2.18	0.20	1.0	ug/l	2.50	87		70-130	14	25	
2-Amino-4,6-Dinitrotoluene	2.36	0.35	1.0	ug/l	2.50	94		70-130	11	25	
2-Nitrotoluene	1.88	0.21	1.0	ug/l	2.50	75		70-130	10	25	
3-Nitrotoluene	2.03	0.37	1.0	ug/l	2.50	81		70-130	0.4	25	
4-Amino-2,6-Dinitrotoluene	2.37	0.17	1.0	ug/l	2.50	95		70-130	18	25	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Explosives by EPA Method 8330 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1813 - EPA 8330A (Continued)											
LCS Dup (W4B1813-BSD1)					Prepared: 02/22/24 Analyzed: 03/13/24						
4-Nitrotoluene	1.80	0.27	1.0	ug/l	2.50		72	70-130	17	25	
HMX	2.48	0.30	1.0	ug/l	2.50		99	70-130	12	25	
Nitrobenzene	1.87	0.16	1.0	ug/l	2.50		75	70-130	19	25	
RDX	2.48	0.33	1.0	ug/l	2.50		99	70-130	14	25	
Tetryl	2.51	0.45	1.0	ug/l	2.50		100	70-130	0.4	25	

Quality Control Results

(Continued)

Glycols by GC/FID

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1920 - EPA 8015B											
Blank (W4B1920-BLK1)					Prepared & Analyzed: 02/22/24						
Ethylene glycol	ND	4.7	10	mg/l							
<i>Surrogate(s)</i>											
1-Propanol	127			mg/l	100		127	50-150			
LCS (W4B1920-BS1)					Prepared & Analyzed: 02/22/24						
Ethylene glycol	91.4	4.7	10	mg/l	100		91	70-130			
<i>Surrogate(s)</i>											
1-Propanol	93.1			mg/l	100		93	50-150			
Matrix Spike (W4B1920-MS1)					Source: 4B20063-06		Prepared & Analyzed: 02/22/24				
Ethylene glycol	94.0	4.7	10	mg/l	100	ND	94	57-127			
<i>Surrogate(s)</i>											
1-Propanol	85.5			mg/l	100		85	50-150			
Matrix Spike Dup (W4B1920-MSD1)					Source: 4B20063-06		Prepared & Analyzed: 02/22/24				
Ethylene glycol	88.8	4.7	10	mg/l	100	ND	89	57-127	6	25	
<i>Surrogate(s)</i>											
1-Propanol	95.6			mg/l	100		96	50-150			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Glyphosate by EPA 547

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2068 - EPA 547											
Blank (W4B2068-BLK1)											
Glyphosate	ND	1.8	5.0	ug/l	Prepared & Analyzed: 02/26/24						
LCS (W4B2068-BS1)											
Glyphosate	24.1	1.8	5.0	ug/l	25.0	96	70-130				
Matrix Spike (W4B2068-MS1)											
Source: 3L04005-04											
Glyphosate	26.5	1.8	5.0	ug/l	25.0	ND	106	41-149			
Matrix Spike (W4B2068-MS2)											
Source: 3L04005-05											
Glyphosate	30.0	1.8	5.0	ug/l	25.0	ND	120	41-149			
Matrix Spike Dup (W4B2068-MSD1)											
Source: 3L04005-04											
Glyphosate	24.9	1.8	5.0	ug/l	25.0	ND	100	41-149	6	30	
Matrix Spike Dup (W4B2068-MSD2)											
Source: 3L04005-05											
Glyphosate	28.5	1.8	5.0	ug/l	25.0	ND	114	41-149	5	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Haloacetic Acids (HAAs) by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1637 - EPA 552.3											
Blank (W4B1637-BLK1)						Prepared: 02/21/24 Analyzed: 03/04/24					
Dibromoacetic acid (dbaa)	ND	0.28	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l							
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l							
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.4			ug/l	10.0		104	70-130			
LCS (W4B1637-BS1)						Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	10.7	0.28	1.0	ug/l	10.0		107	70-130			
Dichloroacetic acid (dcaa)	10.3	0.29	1.0	ug/l	10.0		103	70-130			
Monobromoacetic acid (mbaa)	10.0	0.34	1.0	ug/l	10.0		100	70-130			
Monochloroacetic acid (mcaa)	9.81	0.31	2.0	ug/l	10.0		98	70-130			
Trichloroacetic acid (tcaa)	10.5	0.29	1.0	ug/l	10.0		105	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.0			ug/l	10.0		100	70-130			
Matrix Spike (W4B1637-MS1)						Source: 4B02004-10 Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	11.3	0.28	1.0	ug/l	10.0	0.528	108	70-130			
Dichloroacetic acid (dcaa)	11.1	0.29	1.0	ug/l	10.0	0.607	105	70-130			
Monobromoacetic acid (mbaa)	10.2	0.34	1.0	ug/l	10.0	ND	102	70-130			
Monochloroacetic acid (mcaa)	10.0	0.31	2.0	ug/l	10.0	ND	100	70-130			
Trichloroacetic acid (tcaa)	9.87	0.29	1.0	ug/l	10.0	ND	99	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.1			ug/l	10.0		101	70-130			
Matrix Spike Dup (W4B1637-MSD1)						Source: 4B02004-10 Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	10.8	0.28	1.0	ug/l	10.0	0.528	103	70-130	4	30	
Dichloroacetic acid (dcaa)	10.6	0.29	1.0	ug/l	10.0	0.607	100	70-130	4	30	
Monobromoacetic acid (mbaa)	9.55	0.34	1.0	ug/l	10.0	ND	96	70-130	6	30	
Monochloroacetic acid (mcaa)	10.4	0.31	2.0	ug/l	10.0	ND	104	70-130	3	30	
Trichloroacetic acid (tcaa)	9.70	0.29	1.0	ug/l	10.0	ND	97	70-130	2	30	
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.5			ug/l	10.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2302 - EPA 245.1											
Blank (W4B2302-BLK1)											
Mercury, Total	ND	0.037	0.050	ug/l							
LCS (W4B2302-BS1)											
Mercury, Total	0.954	0.037	0.050	ug/l	1.00		95	85-115			
Matrix Spike (W4B2302-MS1)											
Mercury, Total	0.968	0.037	0.050	ug/l	1.00	ND	97	70-130			
Matrix Spike (W4B2302-MS2)											
Mercury, Total	0.971	0.037	0.050	ug/l	1.00	ND	97	70-130			
Matrix Spike Dup (W4B2302-MSD1)											
Mercury, Total	0.951	0.037	0.050	ug/l	1.00	ND	95	70-130	2	20	
Matrix Spike Dup (W4B2302-MSD2)											
Mercury, Total	0.962	0.037	0.050	ug/l	1.00	ND	96	70-130	0.9	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Nitrosamines by CI GC/MS/MS, EPA 521

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2292 - EPA 521											
Blank (W4B2292-BLK1)						Prepared: 02/28/24 Analyzed: 03/04/24					
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l							
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l							
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l							
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l							
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l							
N-Nitrosomorpholine	ND	0.68	2.0	ng/l							
N-Nitrosopiperidine	ND	0.65	2.0	ng/l							
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l							
<i>Surrogate(s)</i>											
NDMA-d6	22.7			ng/l	25.0		91	70-130			
LCS (W4B2292-BS1)						Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	1.66	0.66	2.0	ng/l	2.00		83	50-150			J
N-Nitrosodimethylamine	2.26	1.3	2.0	ng/l	2.00		113	50-150			
N-Nitrosodi-n-butylamine	1.44	0.53	2.0	ng/l	2.00		72	50-150			J
N-Nitrosodi-n-propylamine	1.61	0.62	2.0	ng/l	2.00		80	50-150			J
N-Nitrosomethylethylamine	1.89	0.54	2.0	ng/l	2.00		95	50-150			J
N-Nitrosomorpholine	1.94	0.68	2.0	ng/l	2.00		97	50-150			J
N-Nitrosopiperidine	1.83	0.65	2.0	ng/l	2.00		91	50-150			J
N-Nitrosopyrrolidine	1.81	0.62	2.0	ng/l	2.00		90	50-150			J
<i>Surrogate(s)</i>											
NDMA-d6	24.6			ng/l	25.0		99	70-130			
Matrix Spike (W4B2292-MS1)						Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	1.85	0.66	2.0	ng/l	2.05	ND	90	50-150			J
N-Nitrosodimethylamine	2.08	1.3	2.0	ng/l	2.05	ND	101	50-150			
N-Nitrosodi-n-butylamine	1.54	0.53	2.0	ng/l	2.05	ND	75	50-150			J
N-Nitrosodi-n-propylamine	1.55	0.62	2.0	ng/l	2.05	ND	75	50-150			J
N-Nitrosomethylethylamine	2.03	0.54	2.0	ng/l	2.05	ND	99	50-150			
N-Nitrosomorpholine	1.87	0.68	2.0	ng/l	2.05	ND	91	50-150			J
N-Nitrosopiperidine	2.00	0.65	2.0	ng/l	2.05	ND	98	50-150			
N-Nitrosopyrrolidine	1.96	0.62	2.0	ng/l	2.05	ND	96	50-150			J
<i>Surrogate(s)</i>											
NDMA-d6	25.7			ng/l	25.7		100	70-130			
Matrix Spike Dup (W4B2292-MSD1)						Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	2.01	0.66	2.0	ng/l	2.05	ND	98	50-150	8	50	
N-Nitrosodimethylamine	2.03	1.3	2.0	ng/l	2.05	ND	99	50-150	2	50	
N-Nitrosodi-n-butylamine	1.73	0.53	2.0	ng/l	2.05	ND	84	50-150	12	50	J
N-Nitrosodi-n-propylamine	1.93	0.62	2.0	ng/l	2.05	ND	94	50-150	22	50	J
N-Nitrosomethylethylamine	2.16	0.54	2.0	ng/l	2.05	ND	105	50-150	6	50	
N-Nitrosomorpholine	1.98	0.68	2.0	ng/l	2.05	ND	96	50-150	5	50	J
N-Nitrosopiperidine	2.10	0.65	2.0	ng/l	2.05	ND	102	50-150	5	50	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Nitrosamines by CI GC/MS/MS, EPA 521 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B2292 - EPA 521 (Continued)											
Matrix Spike Dup (W4B2292-MSD1)											
Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24											
N-Nitrosopyrrolidine	1.95	0.62	2.0	ng/l	2.05	ND	95	50-150	0.6	50	J
<i>Surrogate(s)</i>											
NDMA-d6	25.5			ng/l	25.6		99	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0700 - EPA 533											
Blank (W4C0700-BLK1)						Prepared: 03/08/24 Analyzed: 03/12/24					
11CI-PF3OUdS	ND	0.89	2.0	ng/l							
4:2 FTS	ND	0.83	2.0	ng/l							
6:2 FTS	ND	0.78	2.0	ng/l							
8:2 FTS	ND	0.68	2.0	ng/l							
9CI-PF3ONS	ND	0.84	2.0	ng/l							
ADONA	ND	0.71	2.0	ng/l							
HFPO-DA	ND	0.92	2.0	ng/l							
NFDHA	ND	0.75	2.0	ng/l							
PFBA	ND	0.61	2.0	ng/l							
PFBS	ND	0.46	2.0	ng/l							
PFDA	ND	0.64	2.0	ng/l							
PFDoA	ND	0.65	2.0	ng/l							
PFEESA	ND	0.45	2.0	ng/l							
PFHpA	ND	0.65	2.0	ng/l							
PFHpS	ND	0.60	2.0	ng/l							
PFHxA	ND	0.72	2.0	ng/l							
PFHxS	ND	0.99	2.0	ng/l							
PFMBA	ND	0.62	2.0	ng/l							
PFMPA	ND	0.42	2.0	ng/l							
PFNA	ND	0.88	2.0	ng/l							
PFOA	ND	0.92	2.0	ng/l							
PFOS	ND	0.68	2.0	ng/l							
PFPeA	ND	0.45	2.0	ng/l							
PFPeS	ND	0.50	2.0	ng/l							
PFUnA	ND	0.59	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-4:2 FTS	40.5			ng/l	40.0		101	50-200			
13C2-6:2 FTS	40.3			ng/l	40.0		101	50-200			
13C2-8:2 FTS	40.5			ng/l	40.0		101	50-200			
13C2-PFDoA	10.2			ng/l	10.0		102	50-200			
13C3-PFBS	11.4			ng/l	10.0		114	50-200			
13C3-PFHxS	11.4			ng/l	10.0		114	50-200			
13C4-PFBA	11.1			ng/l	10.0		111	50-200			
13C4-PFHpA	10.5			ng/l	10.0		105	50-200			
13C5-PFHxA	10.6			ng/l	10.0		106	50-200			
13C5-PFPeA	11.0			ng/l	10.0		110	50-200			
13C6-PFDA	10.1			ng/l	10.0		101	50-200			
13C7-PFUnA	10.1			ng/l	10.0		101	50-200			
13C8-PFOA	10.3			ng/l	10.0		103	50-200			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4C0700 - EPA 533 (Continued)											
Blank (W4C0700-BLK1)						Prepared: 03/08/24 Analyzed: 03/12/24					
<i>Surrogate(s)</i>											
13C8-PFOS	11.5			ng/l	10.0		115	50-200			
13C9-PFNA	10.3			ng/l	10.0		103	50-200			
HFPO-DA-13C3	10.2			ng/l	10.0		102	50-200			
LCS (W4C0700-BS1)						Prepared: 03/08/24 Analyzed: 03/12/24					
11CI-PF3OUdS	58.1	0.89	2.0	ng/l	60.0		97	70-130			
4:2 FTS	54.5	0.83	2.0	ng/l	60.0		91	70-130			
6:2 FTS	60.4	0.78	2.0	ng/l	60.0		101	70-130			
8:2 FTS	57.5	0.68	2.0	ng/l	60.0		96	70-130			
9CI-PF3ONS	58.6	0.84	2.0	ng/l	60.0		98	70-130			
ADONA	60.2	0.71	2.0	ng/l	60.0		100	70-130			
HFPO-DA	59.3	0.92	2.0	ng/l	60.0		99	70-130			
NFDHA	55.9	0.75	2.0	ng/l	60.0		93	70-130			
PFBA	59.6	0.61	2.0	ng/l	60.0		99	70-130			
PFBS	57.6	0.46	2.0	ng/l	60.0		96	70-130			
PFDA	60.6	0.64	2.0	ng/l	60.0		101	70-130			
PFDoA	59.3	0.65	2.0	ng/l	60.0		99	70-130			
PFEESA	57.3	0.45	2.0	ng/l	60.0		96	70-130			
PFHpA	59.7	0.65	2.0	ng/l	60.0		100	70-130			
PFHpS	59.9	0.60	2.0	ng/l	60.0		100	70-130			
PFHxA	56.3	0.72	2.0	ng/l	60.0		94	70-130			
PFHxS	59.7	0.99	2.0	ng/l	60.0		100	70-130			
PFMBA	58.4	0.62	2.0	ng/l	60.0		97	70-130			
PFMPA	59.6	0.42	2.0	ng/l	60.0		99	70-130			
PFNA	59.1	0.88	2.0	ng/l	60.0		99	70-130			
PFOA	61.4	0.92	2.0	ng/l	60.0		102	70-130			
PFOS	58.6	0.68	2.0	ng/l	60.0		98	70-130			
PFPeA	59.3	0.45	2.0	ng/l	60.0		99	70-130			
PFPeS	60.3	0.50	2.0	ng/l	60.0		101	70-130			
PFUnA	58.1	0.59	2.0	ng/l	60.0		97	70-130			
<i>Surrogate(s)</i>											
13C2-4:2 FTS	41.2			ng/l	40.0		103	50-200			
13C2-6:2 FTS	40.8			ng/l	40.0		102	50-200			
13C2-8:2 FTS	41.3			ng/l	40.0		103	50-200			
13C2-PFDoA	10.7			ng/l	10.0		107	50-200			
13C3-PFBS	12.0			ng/l	10.0		120	50-200			
13C3-PFHxS	11.4			ng/l	10.0		114	50-200			
13C4-PFBA	11.4			ng/l	10.0		114	50-200			
13C4-PFHpA	10.5			ng/l	10.0		105	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0700 - EPA 533 (Continued)										
LCS (W4C0700-BS1)										
Prepared: 03/08/24 Analyzed: 03/12/24										
<i>Surrogate(s)</i>										
13C5-PFHxA	11.3			ng/l	10.0		113 50-200			
13C5-PFPeA	11.3			ng/l	10.0		113 50-200			
13C6-PFDA	10.4			ng/l	10.0		104 50-200			
13C7-PFUnA	10.9			ng/l	10.0		109 50-200			
13C8-PFOA	10.4			ng/l	10.0		104 50-200			
13C8-PFOS	11.2			ng/l	10.0		112 50-200			
13C9-PFNA	10.5			ng/l	10.0		105 50-200			
HFPO-DA-13C3	10.6			ng/l	10.0		106 50-200			
LCS Dup (W4C0700-BSD1)										
Prepared: 03/08/24 Analyzed: 03/12/24										
11CI-PF3OUdS	57.4	0.89	2.0	ng/l	60.0		96 70-130	1	30	
4:2 FTS	50.7	0.83	2.0	ng/l	60.0		84 70-130	7	30	
6:2 FTS	58.9	0.78	2.0	ng/l	60.0		98 70-130	3	30	
8:2 FTS	59.6	0.68	2.0	ng/l	60.0		99 70-130	4	30	
9CI-PF3ONS	56.3	0.84	2.0	ng/l	60.0		94 70-130	4	30	
ADONA	59.3	0.71	2.0	ng/l	60.0		99 70-130	2	30	
HFPO-DA	60.6	0.92	2.0	ng/l	60.0		101 70-130	2	30	
NFDHA	57.8	0.75	2.0	ng/l	60.0		96 70-130	3	30	
PFBA	58.2	0.61	2.0	ng/l	60.0		97 70-130	2	30	
PFBS	58.9	0.46	2.0	ng/l	60.0		98 70-130	2	30	
PFDA	60.9	0.64	2.0	ng/l	60.0		102 70-130	0.5	30	
PFDoA	62.0	0.65	2.0	ng/l	60.0		103 70-130	4	30	
PFEESA	58.9	0.45	2.0	ng/l	60.0		98 70-130	3	30	
PFHpA	59.3	0.65	2.0	ng/l	60.0		99 70-130	0.7	30	
PFHpS	58.2	0.60	2.0	ng/l	60.0		97 70-130	3	30	
PFHxA	58.3	0.72	2.0	ng/l	60.0		97 70-130	4	30	
PFHxS	55.1	0.99	2.0	ng/l	60.0		92 70-130	8	30	
PFMBA	59.3	0.62	2.0	ng/l	60.0		99 70-130	1	30	
PFMPA	57.8	0.42	2.0	ng/l	60.0		96 70-130	3	30	
PFNA	58.9	0.88	2.0	ng/l	60.0		98 70-130	0.4	30	
PFOA	59.6	0.92	2.0	ng/l	60.0		99 70-130	3	30	
PFOS	57.4	0.68	2.0	ng/l	60.0		96 70-130	2	30	
PFPeA	59.2	0.45	2.0	ng/l	60.0		99 70-130	0.1	30	
PFPeS	55.6	0.50	2.0	ng/l	60.0		93 70-130	8	30	
PFUnA	61.9	0.59	2.0	ng/l	60.0		103 70-130	6	30	
<i>Surrogate(s)</i>										
13C2-4:2 FTS	41.4			ng/l	40.0		104 50-200			
13C2-6:2 FTS	39.4			ng/l	40.0		98 50-200			
13C2-8:2 FTS	38.9			ng/l	40.0		97 50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0700 - EPA 533 (Continued)											
LCS Dup (W4C0700-BSD1)						Prepared: 03/08/24 Analyzed: 03/12/24					
<i>Surrogate(s)</i>											
13C2-PFDoA	10.7			ng/l	10.0		107	50-200			
13C3-PFBS	11.2			ng/l	10.0		112	50-200			
13C3-PFHxS	11.7			ng/l	10.0		117	50-200			
13C4-PFBA	11.3			ng/l	10.0		113	50-200			
13C4-PFHpA	11.0			ng/l	10.0		110	50-200			
13C5-PFHxA	11.2			ng/l	10.0		112	50-200			
13C5-PFPeA	11.1			ng/l	10.0		111	50-200			
13C6-PFDA	10.7			ng/l	10.0		107	50-200			
13C7-PFUnA	10.3			ng/l	10.0		103	50-200			
13C8-PFOA	11.1			ng/l	10.0		111	50-200			
13C8-PFOS	11.2			ng/l	10.0		112	50-200			
13C9-PFNA	10.8			ng/l	10.0		108	50-200			
HFPO-DA-13C3	10.7			ng/l	10.0		107	50-200			

Quality Control Results

(Continued)

Perchlorate by EPA 314.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2296 - EPA 314.0											
Blank (W4B2296-BLK1)						Prepared & Analyzed: 02/28/24					
Perchlorate	ND	0.26	1.0	ug/l							
LCS (W4B2296-BS1)						Prepared & Analyzed: 02/28/24					
Perchlorate	10.0	0.26	1.0	ug/l	10.0		100	85-115			
Matrix Spike (W4B2296-MS1)						Prepared & Analyzed: 02/28/24					
Perchlorate	10.0	0.26	1.0	ug/l	10.0	0.621	94	80-120			
Matrix Spike Dup (W4B2296-MSD1)						Prepared & Analyzed: 02/28/24					
Perchlorate	10.1	0.26	1.0	ug/l	10.0	0.621	95	80-120	1	15	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Radiological Parameters by APHA/EPA Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C1302 - EPA 900.0											
Blank (W4C1302-BLK1)											
Gross Alpha	-1.14			pCi/L							
Counting Uncertainty:	0.437	MDA:	0.684								
Gross Beta	-0.861			pCi/L							
Counting Uncertainty:	0.484	MDA:	0.78								
LCS (W4C1302-BS1)											
Gross Alpha	8.51			pCi/L	12.0		71	60-110			
Counting Uncertainty:	0.659	MDA:	0.684								
Gross Beta	13.6			pCi/L	16.0		85	72-123			
Counting Uncertainty:	0.742	MDA:	0.78								
Matrix Spike (W4C1302-MS1) Source: 4A22022-01											
Gross Alpha	7.76			pCi/L	12.0	1.81	50	28-124			
Counting Uncertainty:	0.823	MDA:	0.954								
Gross Beta	15.7			pCi/L	16.0	2.08	85	61-125			
Counting Uncertainty:	0.819	MDA:	0.901								
Matrix Spike Dup (W4C1302-MSD1) Source: 4A22022-01											
Gross Alpha	7.22			pCi/L	12.0	1.81	45	28-124	7	30	
Counting Uncertainty:	0.816	MDA:	0.956								
Gross Beta	14.6			pCi/L	16.0	2.08	79	61-125	7	30	
Counting Uncertainty:	0.859	MDA:	1.017								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2											
Blank (W4B2424-BLK1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	ND	0.063	0.10	ug/l							
Atrazine	ND	0.042	0.10	ug/l							
Benzo (a) pyrene	ND	0.045	0.10	ug/l							
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							
Bromacil	ND	0.24	0.50	ug/l							
Butachlor	ND	0.040	0.10	ug/l							
Captan	ND	0.32	1.0	ug/l							
Chlorpropham	ND	0.040	0.10	ug/l							
Diazinon	ND	0.022	0.10	ug/l							
Dimethoate	ND	0.041	0.20	ug/l							
Diphenamid	ND	0.030	0.10	ug/l							
Disulfoton	ND	0.11	0.20	ug/l							
EPTC	ND	0.020	0.10	ug/l							
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							
Metolachlor	ND	0.030	0.10	ug/l							
Metribuzin	ND	0.030	0.10	ug/l							
Molinate	ND	0.030	0.10	ug/l							
Prometryn	ND	0.030	0.10	ug/l							
Simazine	ND	0.058	0.10	ug/l							
Terbacil	ND	0.090	2.0	ug/l							
Thiobencarb	ND	0.069	0.10	ug/l							
Trithion	ND	0.054	0.10	ug/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00		99	70-130			
Perylene-d12	3.66			ug/l	5.00		73	50-120			
Triphenyl phosphate	4.65			ug/l	5.00		93	70-130			
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	ND	0.063	0.10	ug/l							QC-2
Atrazine	ND	0.042	0.10	ug/l							QC-2
Benzo (a) pyrene	ND	0.045	0.10	ug/l							QC-2
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							QC-2
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							QC-2
Bromacil	ND	0.24	0.50	ug/l							QC-2
Butachlor	ND	0.040	0.10	ug/l							QC-2
Captan	ND	0.32	1.0	ug/l							QC-2
Chlorpropham	ND	0.040	0.10	ug/l							QC-2
Diazinon	ND	0.022	0.10	ug/l							QC-2
Dimethoate	ND	0.041	0.20	ug/l							QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatiles Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Diphenamid	ND	0.030	0.10	ug/l							QC-2
Disulfoton	ND	0.11	0.20	ug/l							QC-2
EPTC	ND	0.020	0.10	ug/l							QC-2
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							QC-2
Metolachlor	ND	0.030	0.10	ug/l							QC-2
Metribuzin	ND	0.030	0.10	ug/l							QC-2
Molinate	ND	0.030	0.10	ug/l							QC-2
Prometryn	ND	0.030	0.10	ug/l							QC-2
Simazine	ND	0.058	0.10	ug/l							QC-2
Terbacil	ND	0.090	2.0	ug/l							QC-2
Thiobencarb	ND	0.069	0.10	ug/l							QC-2
Trithion	ND	0.054	0.10	ug/l							QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.84			ug/l	5.00		97	70-130			QC-2
Perylene-d12	4.14			ug/l	5.00		83	50-120			QC-2
Triphenyl phosphate	4.92			ug/l	5.00		98	70-130			QC-2
LCS (W4B2424-BS1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	9.57	0.063	0.10	ug/l	7.50		128	70-130			
Atrazine	4.30	0.042	0.10	ug/l	5.00		86	70-130			
Benzo (a) pyrene	4.04	0.045	0.10	ug/l	5.00		81	60-130			
Bis(2-ethylhexyl)adipate	8.19	0.38	5.0	ug/l	5.00		164	70-130			Q-08
Bis(2-ethylhexyl)phthalate	5.93	0.41	3.0	ug/l	5.00		119	70-130			
Bromacil	6.45	0.24	0.50	ug/l	5.00		129	70-130			
Butachlor	5.81	0.040	0.10	ug/l	5.00		116	70-130			
Captan	5.59	0.32	1.0	ug/l	5.00		112	70-130			
Chlorpropham	5.18	0.040	0.10	ug/l	5.00		104	70-130			
Diazinon	3.38	0.022	0.10	ug/l	5.00		68	50-120			
Dimethoate	3.81	0.041	0.20	ug/l	5.00		76	50-120			
Diphenamid	5.69	0.030	0.10	ug/l	5.00		114	70-130			
Disulfoton	3.98	0.11	0.20	ug/l	5.00		80	50-120			
EPTC	4.45	0.020	0.10	ug/l	5.00		89	70-130			
Hexachlorocyclopentadiene	2.20	0.092	1.0	ug/l	2.50		88	33-106			
Metolachlor	6.29	0.030	0.10	ug/l	5.00		126	60-130			
Metribuzin	5.45	0.030	0.10	ug/l	5.00		109	50-120			
Molinate	3.79	0.030	0.10	ug/l	5.00		76	70-130			
Prometryn	3.05	0.030	0.10	ug/l	5.00		61	30-120			
Simazine	4.66	0.058	0.10	ug/l	5.00		93	60-130			
Terbacil	5.12	0.090	2.0	ug/l	5.00		102	70-130			
Thiobencarb	6.72	0.069	0.10	ug/l	5.00		134	70-130			Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatiles Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS (W4B2424-BS1)										
					Prepared: 02/29/24 Analyzed: 03/09/24					
Trithion	6.14	0.054	0.10	ug/l	5.00	123	70-130			
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	2.62			ug/l	5.00	52	70-130			S-11
Perylene-d12	4.14			ug/l	5.00	83	50-120			
Triphenyl phosphate	4.38			ug/l	5.00	88	70-130			
LCS (W4B2424-BS2)										
					Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	7.14	0.063	0.10	ug/l	7.50	95	70-130			QC-2
Atrazine	4.76	0.042	0.10	ug/l	5.00	95	70-130			QC-2
Benzo (a) pyrene	4.07	0.045	0.10	ug/l	5.00	81	60-130			QC-2
Bis(2-ethylhexyl)adipate	5.27	0.38	5.0	ug/l	5.00	105	70-130			QC-2
Bis(2-ethylhexyl)phthalate	4.97	0.41	3.0	ug/l	5.00	99	70-130			QC-2
Bromacil	4.80	0.24	0.50	ug/l	5.00	96	70-130			QC-2
Butachlor	4.38	0.040	0.10	ug/l	5.00	88	70-130			QC-2
Captan	4.76	0.32	1.0	ug/l	5.00	95	70-130			QC-2
Chlorpropham	4.70	0.040	0.10	ug/l	5.00	94	70-130			QC-2
Diazinon	3.01	0.022	0.10	ug/l	5.00	60	50-120			QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00	76	50-120			QC-2
Diphenamid	4.98	0.030	0.10	ug/l	5.00	100	70-130			QC-2
Disulfoton	4.23	0.11	0.20	ug/l	5.00	85	50-120			QC-2
EPTC	5.02	0.020	0.10	ug/l	5.00	100	70-130			QC-2
Hexachlorocyclopentadiene	2.06	0.092	1.0	ug/l	2.50	82	33-106			QC-2
Metolachlor	4.64	0.030	0.10	ug/l	5.00	93	60-130			QC-2
Metribuzin	4.44	0.030	0.10	ug/l	5.00	89	50-120			QC-2
Molinate	4.95	0.030	0.10	ug/l	5.00	99	70-130			QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00	60	30-120			QC-2
Simazine	4.53	0.058	0.10	ug/l	5.00	91	60-130			QC-2
Terbacil	5.50	0.090	2.0	ug/l	5.00	110	70-130			QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00	99	70-130			QC-2
Trithion	4.63	0.054	0.10	ug/l	5.00	93	70-130			QC-2
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	4.96			ug/l	5.00	99	70-130			QC-2
Perylene-d12	4.41			ug/l	5.00	88	50-120			QC-2
Triphenyl phosphate	4.83			ug/l	5.00	97	70-130			QC-2
LCS Dup (W4B2424-BS1)										
					Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	10.3	0.063	0.10	ug/l	7.50	137	70-130	7	30	Q-08
Atrazine	4.62	0.042	0.10	ug/l	5.00	92	70-130	7	30	
Benzo (a) pyrene	4.17	0.045	0.10	ug/l	5.00	83	60-130	3	30	
Bis(2-ethylhexyl)adipate	7.82	0.38	5.0	ug/l	5.00	156	70-130	5	30	Q-08
Bis(2-ethylhexyl)phthalate	6.69	0.41	3.0	ug/l	5.00	134	70-130	12	30	Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS Dup (W4B2424-BSD1)					Prepared: 02/29/24 Analyzed: 03/09/24					
Bromacil	6.32	0.24	0.50	ug/l	5.00	126	70-130	2	30	
Butachlor	5.69	0.040	0.10	ug/l	5.00	114	70-130	2	30	
Captan	6.03	0.32	1.0	ug/l	5.00	121	70-130	8	30	
Chlorpropham	5.50	0.040	0.10	ug/l	5.00	110	70-130	6	30	
Diazinon	3.48	0.022	0.10	ug/l	5.00	70	50-120	3	30	
Dimethoate	4.25	0.041	0.20	ug/l	5.00	85	50-120	11	30	
Diphenamid	5.82	0.030	0.10	ug/l	5.00	116	70-130	2	30	
Disulfoton	4.30	0.11	0.20	ug/l	5.00	86	50-120	8	30	
EPTC	4.82	0.020	0.10	ug/l	5.00	96	70-130	8	30	
Hexachlorocyclopentadiene	2.39	0.092	1.0	ug/l	2.50	96	33-106	8	30	
Metolachlor	6.82	0.030	0.10	ug/l	5.00	136	60-130	8	30	Q-08
Metribuzin	5.82	0.030	0.10	ug/l	5.00	116	50-120	7	30	
Molinate	4.08	0.030	0.10	ug/l	5.00	82	70-130	7	30	
Prometryn	2.94	0.030	0.10	ug/l	5.00	59	30-120	4	30	
Simazine	4.92	0.058	0.10	ug/l	5.00	98	60-130	5	30	
Terbacil	5.48	0.090	2.0	ug/l	5.00	110	70-130	7	30	
Thiobencarb	6.91	0.069	0.10	ug/l	5.00	138	70-130	3	30	Q-08
Trithion	6.93	0.054	0.10	ug/l	5.00	139	70-130	12	30	Q-08
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	5.26			ug/l	5.00	105	70-130			
Perylene-d12	3.95			ug/l	5.00	79	50-120			
Triphenyl phosphate	4.36			ug/l	5.00	87	70-130			
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	7.05	0.063	0.10	ug/l	7.50	94	70-130	1	30	QC-2
Atrazine	4.88	0.042	0.10	ug/l	5.00	98	70-130	2	30	QC-2
Benzo (a) pyrene	4.12	0.045	0.10	ug/l	5.00	82	60-130	1	30	QC-2
Bis(2-ethylhexyl)adipate	5.68	0.38	5.0	ug/l	5.00	114	70-130	7	30	QC-2
Bis(2-ethylhexyl)phthalate	5.39	0.41	3.0	ug/l	5.00	108	70-130	8	30	QC-2
Bromacil	4.68	0.24	0.50	ug/l	5.00	94	70-130	2	30	QC-2
Butachlor	4.62	0.040	0.10	ug/l	5.00	92	70-130	6	30	QC-2
Captan	4.96	0.32	1.0	ug/l	5.00	99	70-130	4	30	QC-2
Chlorpropham	5.17	0.040	0.10	ug/l	5.00	103	70-130	10	30	QC-2
Diazinon	2.81	0.022	0.10	ug/l	5.00	56	50-120	7	30	QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00	76	50-120	0.2	30	QC-2
Diphenamid	5.12	0.030	0.10	ug/l	5.00	102	70-130	3	30	QC-2
Disulfoton	4.28	0.11	0.20	ug/l	5.00	86	50-120	1	30	QC-2
EPTC	5.25	0.020	0.10	ug/l	5.00	105	70-130	5	30	QC-2
Hexachlorocyclopentadiene	2.16	0.092	1.0	ug/l	2.50	87	33-106	5	30	QC-2
Metolachlor	4.55	0.030	0.10	ug/l	5.00	91	60-130	2	30	QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24						
Metribuzin	4.48	0.030	0.10	ug/l	5.00	90	50-120	1	30		QC-2
Molinate	5.69	0.030	0.10	ug/l	5.00	114	70-130	14	30		QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00	60	30-120	0.1	30		QC-2
Simazine	4.22	0.058	0.10	ug/l	5.00	84	60-130	7	30		QC-2
Terbacil	5.64	0.090	2.0	ug/l	5.00	113	70-130	3	30		QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00	99	70-130	0.03	30		QC-2
Trithion	4.58	0.054	0.10	ug/l	5.00	92	70-130	1	30		QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00	99	70-130				QC-2
Perylene-d12	4.23			ug/l	5.00	85	50-120				QC-2
Triphenyl phosphate	4.92			ug/l	5.00	98	70-130				QC-2

Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0010 - EPA 1613B											
Blank (W4C0010-BLK1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l							
LCS (W4C0010-BS1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	7.98	2.48	5.00	pg/l	10.0	80	73-146				
LCS Dup (W4C0010-BSD1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	9.48	2.48	5.00	pg/l	10.0	95	73-146	17	20		

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
04/30/2024 15:30

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organics by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2414 - EPA 524.3										
Blank (W4B2414-BLK1)					Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l						
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l						
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.426			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.413			ug/l	0.400		103 70-130			
LCS (W4B2414-BS1)					Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	0.0625	0.0042	0.010	ug/l	0.0500		125 70-130			
1,2-Dibromoethane (EDB)	0.0563	0.0029	0.020	ug/l	0.0500		113 70-130			
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.419			ug/l	0.400		105 70-130			
4-Bromofluorobenzene	0.409			ug/l	0.400		102 70-130			
LCS Dup (W4B2414-BSD1)					Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	0.0608	0.0042	0.010	ug/l	0.0500		122 70-130	3	30	
1,2-Dibromoethane (EDB)	0.0569	0.0029	0.020	ug/l	0.0500		114 70-130	1	30	
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.422			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.414			ug/l	0.400		104 70-130			
Duplicate (W4B2414-DUP1)					Source: 4B15126-01 Prepared & Analyzed: 02/29/24					
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l		ND				30
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l		ND				30
<i>Surrogate(s)</i>										
1,2-Dichlorobenzene-d4	0.425			ug/l	0.400		106 70-130			
4-Bromofluorobenzene	0.415			ug/l	0.400		104 70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 04/30/2024 15:30

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
Q-02	Low recovery of this analyte in the QC sample. The analysis of the low level standard produced acceptable recovery indicating that the sample result might be accurately reported as Not Detected.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
U	Result not detected above the detection limit
%REC	Percent Recovery
Dil	Dilution
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B20133

Project: COSM 97-005 - DDW Standards

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 5/01/2024

Received Date: 02/18/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

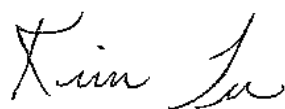
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/18/24 with the Chain-of-Custody document. The samples were received in good condition, at 12.5 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-7-S22	Brown & Caldwell	4B20133-01	Water	02/18/24 09:55	
AT-RES-7-S22D	Brown & Caldwell	4B20133-02	Water	02/18/24 14:35	
AT-RES-7-S22	Brown & Caldwell	4B20133-03	Water	02/18/24 00:00	
AT-RES-7-S22D	Brown & Caldwell	4B20133-04	Water	02/18/24 00:00	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 1613B in Water				
2,3,7,8-TCDD (Dioxin)	1746-01-6		⊗	
EPA 508.1 in Water				
Aldrin	309-00-2	⊗		⊗
alpha-BHC	319-84-6	⊗		⊗
beta-BHC	319-85-7	⊗		⊗
delta-BHC	319-86-8	⊗		⊗
gamma-BHC (Lindane)	58-89-9			⊗
4,4'-DDD	72-54-8	⊗		⊗
4,4'-DDE	72-55-9	⊗		⊗
4,4'-DDT	50-29-3	⊗		⊗
Dieldrin	60-57-1	⊗		⊗
Endosulfan I	959-98-8	⊗		⊗
Endosulfan II	33213-65-9	⊗		⊗
Endosulfan sulfate	1031-07-8	⊗		⊗
Endrin aldehyde	7421-93-4	⊗		⊗
Chlorothalonil	1897-45-6	⊗	⊗	⊗
Trifluralin	1582-09-8	⊗		⊗
Toxaphene	8001-35-2			⊗
PCBs, Total				⊗
EPA 515.4 in Water				
3,5-Dichlorobenzoic acid	51-36-5	⊗		⊗
Dichloroprop	120-36-5	⊗		⊗
2,4,5-T	93-76-5	⊗		⊗
2,4-DB	94-82-6	⊗		⊗
DCPA	1861-32-1	⊗		⊗
Acifluorfen	50594-66-6	⊗		⊗
Chloramben	133-90-4	⊗	⊗	⊗
EPA 521 in Water				
N-Nitrosodimethylamine	62-75-9	⊗	⊗	⊗
N-Nitrosomethylethylamine	10595-95-6	⊗	⊗	⊗
N-Nitrosodiethylamine	55-18-5	⊗	⊗	⊗

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 521 in Water (Continued)				
N-Nitrosodi-n-propylamine	621-64-7	⊗	⊗	⊗
N-Nitrosomorpholine	59-89-2	⊗	⊗	⊗
N-Nitrosopyrrolidine	930-55-2	⊗	⊗	⊗
N-Nitrosopiperidine	100-75-4	⊗	⊗	⊗
N-Nitrosodi-n-butylamine	924-16-3	⊗	⊗	⊗
NDMA-d6		⊗	⊗	⊗
EPA 525.2 in Water				
Bromacil	314-40-9	⊗		⊗
Captan	133-06-2	⊗	⊗	⊗
Chlorpropham	101-21-3	⊗		⊗
Diazinon	333-41-5	⊗		⊗
Dimethoate	60-51-5	⊗	⊗	⊗
Diphenamid	957-51-7	⊗		⊗
Disulfoton	298-04-4	⊗		⊗
EPTC	759-94-4	⊗		⊗
Metolachlor	51218-45-2	⊗		⊗
Metribuzin	21087-64-9	⊗		⊗
Prometryn	7287-19-6	⊗		⊗
Terbacil	5902-51-2	⊗		⊗
Trithion	786-19-6	⊗	⊗	⊗
EPA 531.2 in Water				
Propoxur (Baygon)	114-26-1	⊗		⊗
Methiocarb	2032-65-7	⊗		⊗
EPA 556 in Water				
Formaldehyde	50-00-0	⊗	⊗	⊗
2,4,5-TFAP	129322-83-4	⊗	⊗	⊗
EPA 8015B in Water				
Ethylene glycol	107-21-1	⊗		⊗
EPA 8330A in Water				
HMX	2691-41-0	⊗		⊗
RDX	121-82-4	⊗		⊗
1,3,5-Trinitrobenzene	99-35-4			⊗
1,3-Dinitrobenzene	99-65-0			⊗
Nitrobenzene	98-95-3			⊗
Tetryl	479-45-8	⊗		⊗
2,4,6-Trinitrotoluene	118-96-7			⊗
4-Amino-2,6-Dinitrotoluene	19406-51-0	⊗	⊗	⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Analyses Accreditation Summary

(Continued)

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 8330A in Water (Continued)				
2-Amino-4,6-Dinitrotoluene	35572-78-2	⊗		⊗
2,6-Dinitrotoluene	606-20-2			⊗
2,4-Dinitrotoluene	121-14-2			⊗
2-Nitrotoluene	88-72-2			⊗
4-Nitrotoluene	99-99-0			⊗
3-Nitrotoluene	99-08-1			⊗
EPA 900.0 in Water				
Gross Alpha			⊗	
Gross Beta			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Carbamates and Urea Pesticides

Method: EPA 531.2

Instr: LC11

Batch ID: W4B2044

Preparation: _NONE (LC)

Prepared: 02/25/24 10:29

Analyst: cam

3-Hydroxycarbofuran	ND	0.82	2.0	ug/l	1	02/26/24	
Aldicarb	ND	0.58	2.0	ug/l	1	02/26/24	
Aldicarb sulfone	ND	0.73	2.0	ug/l	1	02/26/24	
Aldicarb sulfoxide	ND	1.0	2.0	ug/l	1	02/26/24	
Carbaryl	ND	1.0	2.0	ug/l	1	02/26/24	
Carbofuran	ND	1.0	2.0	ug/l	1	02/26/24	
Methiocarb	ND	1.0	2.0	ug/l	1	02/26/24	
Methomyl	ND	1.3	2.0	ug/l	1	02/26/24	
Oxamyl	ND	1.1	2.0	ug/l	1	02/26/24	
Propoxur (Baygon)	ND	1.4	2.0	ug/l	1	02/26/24	

Surrogate(s)

BDMC	120%	Conc: 12.0	70-130			02/26/24	
------	------	------------	--------	--	--	----------	--

Chlorinated Acids Herbicides by GC/ECD

Method: EPA 515.4

Instr: GC08

Batch ID: W4B2149

Preparation: EPA 515.4/Micro Ext. Drtz

Prepared: 02/27/24 08:15

Analyst: alf

2,4,5-T	ND	0.065	0.20	ug/l	1	03/12/24	
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l	1	03/12/24	
2,4-D	ND	0.14	0.40	ug/l	1	03/12/24	
2,4-DB	ND	0.19	2.0	ug/l	1	03/12/24	
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l	1	03/12/24	
Acifluorfen	ND	0.030	0.40	ug/l	1	03/12/24	
Bentazon	ND	0.23	2.0	ug/l	1	03/12/24	
Dalapon	ND	0.11	0.40	ug/l	1	03/12/24	
DCPA	ND	0.029	0.10	ug/l	1	03/12/24	
Dicamba	ND	0.15	0.60	ug/l	1	03/12/24	
Dichloroprop	ND	0.12	0.30	ug/l	1	03/12/24	
Dinoseb	ND	0.033	0.40	ug/l	1	03/12/24	
Pentachlorophenol	ND	0.014	0.20	ug/l	1	03/12/24	
Picloram	ND	0.050	0.60	ug/l	1	03/12/24	

Surrogate(s)

2,4-DCAA	68%	Conc: 6.76	70-130			03/12/24	S-04
----------	-----	------------	--------	--	--	----------	------

Chlorinated Pesticides and/or PCBs by GC/ECD

Method: EPA 508.1

Instr: GC08

Batch ID: W4B2423

Preparation: EPA 508.1/SPE

Prepared: 02/29/24 08:34

Analyst: alf

4,4'-DDD	ND	0.0030	0.010	ug/l	1	03/06/24	
----------	----	--------	-------	------	---	----------	--

4B20133

Page 5 of 46

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Method: EPA 508.1

Instr: GC08

Batch ID: W4B2423

Preparation: EPA 508.1/SPE

Prepared: 02/29/24 08:34

Analyst: alf

4,4'-DDE	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
4,4'-DDT	ND	0.0030	0.010	ug/l	1	03/06/24	
Aldrin	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
alpha-BHC	ND	0.0015	0.010	ug/l	1	03/06/24	
Aroclor 1016	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1221	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1232	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1242	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1248	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1254	ND	0.10	0.10	ug/l	1	03/06/24	
Aroclor 1260	ND	0.10	0.10	ug/l	1	03/06/24	Q-02
beta-BHC	ND	0.010	0.010	ug/l	1	03/06/24	
Chlordane (tech)	ND	0.067	0.10	ug/l	1	03/06/24	
Chlorothalonil	ND	0.0040	0.050	ug/l	1	03/06/24	
delta-BHC	ND	0.0030	0.010	ug/l	1	03/06/24	
Dieldrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endosulfan I	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endosulfan II	ND	0.0019	0.010	ug/l	1	03/06/24	
Endosulfan sulfate	ND	0.0030	0.010	ug/l	1	03/06/24	BS-04
Endrin	ND	0.0030	0.010	ug/l	1	03/06/24	
Endrin aldehyde	ND	0.0040	0.010	ug/l	1	03/06/24	Q-02
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l	1	03/06/24	
Heptachlor	ND	0.010	0.010	ug/l	1	03/06/24	
Heptachlor epoxide	ND	0.0019	0.010	ug/l	1	03/06/24	
Hexachlorobenzene	ND	0.0019	0.050	ug/l	1	03/06/24	
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l	1	03/06/24	
Methoxychlor	ND	0.0030	0.010	ug/l	1	03/06/24	
PCBs, Total	ND	0.10	0.50	ug/l	1	03/06/24	
Propachlor	ND	0.045	0.20	ug/l	1	03/06/24	
Toxaphene	ND	0.37	1.0	ug/l	1	03/06/24	
Trifluralin	ND	0.0043	0.010	ug/l	1	03/06/24	

Surrogate(s)

4,4-Dibromobiphenyl 82% Conc: 0.0788 70-130 03/06/24

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

4B20133

Page 6 of 46

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: EPA 335.4			Instr: AA01				
Batch ID: W4B2277		Preparation: _NONE (WETCHEM)		Prepared: 02/27/24 19:14		Analyst: KAC	
Cyanide, Total	ND	1.5	5.0	ug/l	1	02/28/24	
Diquat and Paraquat by EPA 549.2							
Method: EPA 549.2			Instr: LC10				
Batch ID: W4B1814		Preparation: EPA 549.2/SPE		Prepared: 02/22/24 08:48		Analyst: cam	
Diquat	ND	1.2	4.0	ug/l	1	02/28/24	
Endothall By EPA 548.1							
Method: EPA 548.1			Instr: GCMS06				
Batch ID: W4B1800		Preparation: EPA 548.1/SPE		Prepared: 02/22/24 07:49		Analyst: rmr	
Endothall	ND	11	45	ug/l	1	02/27/24	
Explosives by EPA Method 8330							
Method: EPA 8330A			Instr: LC10				
Batch ID: W4B1813		Preparation: Method (SPE)		Prepared: 02/23/24 08:46		Analyst: cam	
1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l	1	03/13/24	
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l	1	03/13/24	
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l	1	03/13/24	
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l	1	03/13/24	
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l	1	03/13/24	
2-Nitrotoluene	ND	0.21	1.0	ug/l	1	03/13/24	
3-Nitrotoluene	ND	0.37	1.0	ug/l	1	03/13/24	
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l	1	03/13/24	
4-Nitrotoluene	ND	0.27	1.0	ug/l	1	03/13/24	
HMX	ND	0.30	1.0	ug/l	1	03/13/24	
Nitrobenzene	ND	0.16	1.0	ug/l	1	03/13/24	
RDX	ND	0.33	1.0	ug/l	1	03/13/24	
Tetryl	ND	0.45	1.0	ug/l	1	03/13/24	
Glyphosate by EPA 547							
Method: EPA 547			Instr: LC11				
Batch ID: W4B2068		Preparation: _NONE (LC)		Prepared: 02/26/24 08:52		Analyst: cam	
Glyphosate	ND	1.8	5.0	ug/l	1	02/27/24	
Haloacetic Acids (HAAs) by GC/ECD							
Method: EPA 552.3			Instr: GC05				
Batch ID: W4B1637		Preparation: EPA 552.3/Micro Ext. Drtz		Prepared: 02/21/24 08:38		Analyst: ecs	
Dibromoacetic acid (dbaa)	0.58	0.28	1.0	ug/l	1	03/05/24	J
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l	1	03/05/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Haloacetic Acids (HAAs) by GC/ECD (Continued)

Method: EPA 552.3		Instr: GC05					
Batch ID: W4B1637	Preparation: EPA 552.3/Micro Ext. Drtz	Prepared: 02/21/24 08:38		Analyst: ecs			
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l	1	03/05/24	
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l	1	03/05/24	
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l	1	03/05/24	
<i>Surrogate(s)</i>							
2-Bromobutyric acid	108%	Conc: 10.8	70-130			03/05/24	

Metals by EPA 200 Series Methods

Method: EPA 245.1		Instr: HG03					
Batch ID: W4B2302	Preparation: EPA 245.1	Prepared: 02/28/24 09:08		Analyst: kjo			
Mercury, Total	ND	0.037	0.050	ug/l	1	03/01/24	

Perchlorate by EPA 314.0

Method: EPA 314.0		Instr: LC08_Channel1					
Batch ID: W4B2296	Preparation: _NONE (LC)	Prepared: 02/28/24 08:43		Analyst: cam			
Perchlorate	ND	0.26	1.0	ug/l	1	02/28/24	

Radiological Parameters by APHA/EPA Methods

Method: EPA 900.0		Instr: RAD02					
Batch ID: W4C1302	Preparation: _NONE (RADIOCHEM)	Prepared: 03/16/24 14:25		Analyst: ela			
Gross Alpha	2.70			pCi/L	1	03/21/24	
Counting Uncertainty: 0.602	MDA: 0.828						
Gross Beta	2.91			pCi/L	1	03/21/24	
Counting Uncertainty: 0.814	MDA: 1.295						

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2		Instr: GCMS16					
Batch ID: W4B2424	Preparation: EPA 525.2/SPE	Prepared: 02/29/24 08:39		Analyst: rmr			
Alachlor	ND	0.063	0.10	ug/l	1	03/09/24	
Atrazine	ND	0.042	0.10	ug/l	1	03/09/24	
Benzo (a) pyrene	ND	0.045	0.10	ug/l	1	03/09/24	
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l	1	03/09/24	
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l	1	03/09/24	
Bromacil	ND	0.24	0.50	ug/l	1	03/09/24	
Butachlor	ND	0.040	0.10	ug/l	1	03/09/24	
Captan	ND	0.32	1.0	ug/l	1	03/09/24	
Chlorpropham	ND	0.040	0.10	ug/l	1	03/09/24	
Diazinon	ND	0.022	0.10	ug/l	1	03/09/24	
Dimethoate	ND	0.041	0.20	ug/l	1	03/09/24	
Diphenamid	ND	0.030	0.10	ug/l	1	03/09/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 9:55 by Brown & Caldwell

4B20133-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Semivolatile Organic Compounds by GC/MS (Continued)

Method: EPA 525.2

Instr: GCMS16

Batch ID: W4B2424

Preparation: EPA 525.2/SPE

Prepared: 02/29/24 08:39

Analyst: rmr

Disulfoton	ND	0.11	0.20	ug/l	1	03/09/24	
EPTC	ND	0.020	0.10	ug/l	1	03/09/24	
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l	1	03/09/24	
Metolachlor	ND	0.030	0.10	ug/l	1	03/09/24	
Metribuzin	ND	0.030	0.10	ug/l	1	03/09/24	
Molinate	ND	0.030	0.10	ug/l	1	03/09/24	
Prometryn	ND	0.030	0.10	ug/l	1	03/09/24	
Simazine	ND	0.058	0.10	ug/l	1	03/09/24	
Terbacil	ND	0.090	2.0	ug/l	1	03/09/24	
Thiobencarb	ND	0.069	0.10	ug/l	1	03/09/24	
Trithion	ND	0.054	0.10	ug/l	1	03/09/24	

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	103%	Conc: 4.93	70-130			03/09/24	
Perylene-d12	78%	Conc: 3.76	50-120			03/09/24	
Triphenyl phosphate	70%	Conc: 3.36	70-130			03/09/24	

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 1613B

Instr: GCMS15

Batch ID: W4C0010

Preparation: EPA 3510C

Prepared: 03/01/24 07:56

Analyst: AJC

2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l	1	03/05/24	
-----------------------	----	------	------	------	---	----------	--

Volatile Organics by P&T and GC/MS

Method: EPA 524.3

Instr: GCMS04

Batch ID: W4B2414

Preparation: Method (P+T)

Prepared: 02/29/24 07:37

Analyst: ADM

1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l	1	02/29/24	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l	1	02/29/24	

Surrogate(s)

1,2-Dichlorobenzene-d4	106%	Conc: 0.425	70-130			02/29/24	
4-Bromofluorobenzene	104%	Conc: 0.414	70-130			02/29/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 14:35 by Brown & Caldwell

4B20133-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Aldehydes and Carbonyl Compounds by GC/ECD							
Method: EPA 556				Instr: GC08			
Batch ID: W4B1809	Preparation: EPA 556/Micro Ext.		Prepared: 02/22/24 08:35		Analyst: GC08		
Formaldehyde	12	0.86	2.0	ug/l	1	03/02/24	
<i>Surrogate(s)</i>							
2,4,5-TFAP	86%	Conc: 17.2	70-130			03/02/24	
Glycols by GC/FID							
Method: EPA 8015B				Instr: GC09			
Batch ID: W4B1920	Preparation: _NONE (SVOC)		Prepared: 02/22/24 16:00		Analyst: alf		
Ethylene glycol	ND	4.7	10	mg/l	1	02/22/24	
<i>Surrogate(s)</i>							
1-Propanol	104%	Conc: 104	50-150			02/22/24	
Nitrosamines by CI GC/MS/MS, EPA 521							
Method: EPA 521				Instr: GCMS09			
Batch ID: W4B2292	Preparation: EPA 521/SPE		Prepared: 02/28/24 08:07		Analyst: mld		
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l	1	03/05/24	
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l	1	03/05/24	
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l	1	03/05/24	
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l	1	03/05/24	
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l	1	03/05/24	
N-Nitrosomorpholine	ND	0.68	2.0	ng/l	1	03/05/24	
N-Nitrosopiperidine	ND	0.65	2.0	ng/l	1	03/05/24	
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l	1	03/05/24	
<i>Surrogate(s)</i>							
NDMA-d6	94%	Conc: 23.6	70-130			03/05/24	
Per- and Polyflourinated Alkyl Substances (PFAS) by LC-MS/MS							
Method: EPA 533				Instr: LCMS06			
Batch ID: W4C0700	Preparation: EPA 533/SPE		Prepared: 03/08/24 11:59		Analyst: rjr		
11CI-PF3OUdS	ND	0.76	1.7	ng/l	1	03/12/24	
4:2 FTS	ND	0.71	1.7	ng/l	1	03/12/24	
6:2 FTS	ND	0.67	1.7	ng/l	1	03/12/24	
8:2 FTS	ND	0.58	1.7	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.72	1.7	ng/l	1	03/12/24	
ADONA	ND	0.61	1.7	ng/l	1	03/12/24	
HFPO-DA	ND	0.79	1.7	ng/l	1	03/12/24	
NFDHA	ND	0.64	1.7	ng/l	1	03/12/24	
PFBA	ND	0.52	1.7	ng/l	1	03/12/24	
PFBS	ND	0.39	1.7	ng/l	1	03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 14:35 by Brown & Caldwell

4B20133-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0700

Preparation: EPA 533/SPE

Prepared: 03/08/24 11:59

Analyst: rjr

PFDA	ND	0.55	1.7	ng/l	1	03/12/24	
PFDoA	ND	0.56	1.7	ng/l	1	03/12/24	
PFEESA	ND	0.39	1.7	ng/l	1	03/12/24	
PFHpA	ND	0.56	1.7	ng/l	1	03/12/24	
PFHpS	ND	0.51	1.7	ng/l	1	03/12/24	
PFHxA	ND	0.62	1.7	ng/l	1	03/12/24	
PFHxS	ND	0.85	1.7	ng/l	1	03/12/24	
PFMBA	ND	0.53	1.7	ng/l	1	03/12/24	
PFMPA	ND	0.36	1.7	ng/l	1	03/12/24	
PFNA	ND	0.75	1.7	ng/l	1	03/12/24	
PFOA	ND	0.79	1.7	ng/l	1	03/12/24	
PFOS	ND	0.58	1.7	ng/l	1	03/12/24	
PFPeA	ND	0.38	1.7	ng/l	1	03/12/24	
PFPeS	ND	0.43	1.7	ng/l	1	03/12/24	
PFUnA	ND	0.51	1.7	ng/l	1	03/12/24	

Surrogate(s)

13C2-4:2 FTS	96%	Conc: 32.9	50-200			03/12/24	
13C2-6:2 FTS	96%	Conc: 32.9	50-200			03/12/24	
13C2-8:2 FTS	98%	Conc: 33.6	50-200			03/12/24	
13C2-PFDoA	99%	Conc: 8.44	50-200			03/12/24	
13C3-PFBS	111%	Conc: 9.47	50-200			03/12/24	
13C3-PFHxS	106%	Conc: 9.09	50-200			03/12/24	
13C4-PFBA	109%	Conc: 9.30	50-200			03/12/24	
13C4-PFHpA	102%	Conc: 8.70	50-200			03/12/24	
13C5-PFHxA	104%	Conc: 8.87	50-200			03/12/24	
13C5-PFPeA	110%	Conc: 9.38	50-200			03/12/24	
13C6-PFDA	100%	Conc: 8.60	50-200			03/12/24	
13C7-PFUnA	100%	Conc: 8.54	50-200			03/12/24	
13C8-PFOA	100%	Conc: 8.57	50-200			03/12/24	
13C8-PFOS	109%	Conc: 9.35	50-200			03/12/24	
13C9-PFNA	102%	Conc: 8.71	50-200			03/12/24	
HFPO-DA-13C3	95%	Conc: 8.11	50-200			03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 0:00 by Brown & Caldwell

4B20133-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0700

Preparation: EPA 533/SPE

Prepared: 03/08/24 11:59

Analyst: rjr

11CI-PF3OUdS	ND	0.70	1.6	ng/l	1	03/12/24	
4:2 FTS	ND	0.66	1.6	ng/l	1	03/12/24	
6:2 FTS	ND	0.62	1.6	ng/l	1	03/12/24	
8:2 FTS	ND	0.54	1.6	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.67	1.6	ng/l	1	03/12/24	
ADONA	ND	0.56	1.6	ng/l	1	03/12/24	
HFPO-DA	ND	0.73	1.6	ng/l	1	03/12/24	
NFDHA	ND	0.59	1.6	ng/l	1	03/12/24	
PFBA	ND	0.48	1.6	ng/l	1	03/12/24	
PFBS	ND	0.37	1.6	ng/l	1	03/12/24	
PFDA	ND	0.51	1.6	ng/l	1	03/12/24	
PFDoA	ND	0.52	1.6	ng/l	1	03/12/24	
PFEESA	ND	0.36	1.6	ng/l	1	03/12/24	
PFHpA	ND	0.52	1.6	ng/l	1	03/12/24	
PFHpS	ND	0.48	1.6	ng/l	1	03/12/24	
PFHxA	ND	0.57	1.6	ng/l	1	03/12/24	
PFHxS	ND	0.79	1.6	ng/l	1	03/12/24	
PFMBA	ND	0.49	1.6	ng/l	1	03/12/24	
PFMPA	ND	0.33	1.6	ng/l	1	03/12/24	
PFNA	ND	0.70	1.6	ng/l	1	03/12/24	
PFOA	ND	0.73	1.6	ng/l	1	03/12/24	
PFOS	ND	0.54	1.6	ng/l	1	03/12/24	
PFPeA	ND	0.36	1.6	ng/l	1	03/12/24	
PFPeS	ND	0.40	1.6	ng/l	1	03/12/24	
PFUnA	ND	0.47	1.6	ng/l	1	03/12/24	

Surrogate(s)

13C2-4:2 FTS	104%	Conc: 32.9	50-200	03/12/24
13C2-6:2 FTS	101%	Conc: 32.1	50-200	03/12/24
13C2-8:2 FTS	102%	Conc: 32.5	50-200	03/12/24
13C2-PFDoA	105%	Conc: 8.32	50-200	03/12/24
13C3-PFBS	116%	Conc: 9.22	50-200	03/12/24
13C3-PFHxS	111%	Conc: 8.78	50-200	03/12/24
13C4-PFBA	111%	Conc: 8.82	50-200	03/12/24
13C4-PFHpA	109%	Conc: 8.63	50-200	03/12/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22

Sampled: 02/18/24 0:00 by Brown & Caldwell

4B20133-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0700		Preparation: EPA 533/SPE		Prepared: 03/08/24 11:59		Analyst: rjr	
13C5-PFHxA	114%	Conc: 9.01	50-200			03/12/24	
13C5-PFPeA	111%	Conc: 8.79	50-200			03/12/24	
13C6-PFDA	110%	Conc: 8.77	50-200			03/12/24	
13C7-PFUnA	109%	Conc: 8.63	50-200			03/12/24	
13C8-PFOA	107%	Conc: 8.49	50-200			03/12/24	
13C8-PFOS	108%	Conc: 8.60	50-200			03/12/24	
13C9-PFNA	109%	Conc: 8.62	50-200			03/12/24	
HFPO-DA-13C3	109%	Conc: 8.62	50-200			03/12/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 0:00 by Brown & Caldwell

4B20133-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Method: EPA 533

Instr: LCMS06

Batch ID: W4C0700

Preparation: EPA 533/SPE

Prepared: 03/08/24 11:59

Analyst: rjr

11CI-PF3OUdS	ND	0.72	1.6	ng/l	1	03/12/24	
4:2 FTS	ND	0.67	1.6	ng/l	1	03/12/24	
6:2 FTS	ND	0.63	1.6	ng/l	1	03/12/24	
8:2 FTS	ND	0.55	1.6	ng/l	1	03/12/24	
9CI-PF3ONS	ND	0.68	1.6	ng/l	1	03/12/24	
ADONA	ND	0.58	1.6	ng/l	1	03/12/24	
HFPO-DA	ND	0.75	1.6	ng/l	1	03/12/24	
NFDHA	ND	0.61	1.6	ng/l	1	03/12/24	
PFBA	ND	0.49	1.6	ng/l	1	03/12/24	
PFBS	ND	0.37	1.6	ng/l	1	03/12/24	
PFDA	ND	0.52	1.6	ng/l	1	03/12/24	
PFDoA	ND	0.53	1.6	ng/l	1	03/12/24	
PFEESA	ND	0.37	1.6	ng/l	1	03/12/24	
PFHpA	ND	0.53	1.6	ng/l	1	03/12/24	
PFHpS	ND	0.49	1.6	ng/l	1	03/12/24	
PFHxA	ND	0.58	1.6	ng/l	1	03/12/24	
PFHxS	ND	0.81	1.6	ng/l	1	03/12/24	
PFMBA	ND	0.50	1.6	ng/l	1	03/12/24	
PFMPA	ND	0.34	1.6	ng/l	1	03/12/24	
PFNA	ND	0.71	1.6	ng/l	1	03/12/24	
PFOA	ND	0.75	1.6	ng/l	1	03/12/24	
PFOS	ND	0.55	1.6	ng/l	1	03/12/24	
PFPeA	ND	0.36	1.6	ng/l	1	03/12/24	
PFPeS	ND	0.40	1.6	ng/l	1	03/12/24	
PFUnA	ND	0.48	1.6	ng/l	1	03/12/24	

Surrogate(s)

13C2-4:2 FTS	105%	Conc: 34.2	50-200	03/12/24
13C2-6:2 FTS	101%	Conc: 32.9	50-200	03/12/24
13C2-8:2 FTS	102%	Conc: 33.2	50-200	03/12/24
13C2-PFDoA	105%	Conc: 8.52	50-200	03/12/24
13C3-PFBS	115%	Conc: 9.34	50-200	03/12/24
13C3-PFHxS	112%	Conc: 9.06	50-200	03/12/24
13C4-PFBA	112%	Conc: 9.07	50-200	03/12/24
13C4-PFHpA	103%	Conc: 8.36	50-200	03/12/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: AT-RES-7-S22D

Sampled: 02/18/24 0:00 by Brown & Caldwell

4B20133-04 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)							
Method: EPA 533			Instr: LCMS06				
Batch ID: W4C0700		Preparation: EPA 533/SPE		Prepared: 03/08/24 11:59		Analyst: rjr	
13C5-PFHxA	106%	Conc: 8.64	50-200			03/12/24	
13C5-PFPeA	113%	Conc: 9.14	50-200			03/12/24	
13C6-PFDA	104%	Conc: 8.43	50-200			03/12/24	
13C7-PFUnA	104%	Conc: 8.47	50-200			03/12/24	
13C8-PFOA	106%	Conc: 8.63	50-200			03/12/24	
13C8-PFOS	114%	Conc: 9.22	50-200			03/12/24	
13C9-PFNA	104%	Conc: 8.46	50-200			03/12/24	
HFPO-DA-13C3	98%	Conc: 7.95	50-200			03/12/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

05/01/2024 10:19

Project Manager: Brown & Caldwell

Sample Results GEL Laboratories, LLC

Sample: AT-RES-7-S22
 4B20133-01 (Water) Sampled: 02/18/24 9:55 by Brown & Caldwell

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 903.1							
Method: EPA 903.1	Batch ID: 2575902		Prepared: 03/19/24 00:00			Analyst: MJ2	
Radium-226	0.137			pCi/L	1	03/19/24	U
Uncertainty: 0.149	MDA: 0.234						

EPA 904.0/ EPA 9320							
Method: EPA 904.0/ EPA 9320	Batch ID: 2586630		Prepared: 03/28/24 00:00			Analyst: JE1	
Radium-228	0.419			pCi/L	1	03/28/24	U
Uncertainty: 0.480	MDA: 0.805						

<i>Surrogate(s)</i>							
<i>Barium Carrier</i>	95.5%		25-125			03/28/24	
<i>Yttrium Carrier</i>	65.5%		25-125			03/28/24	

EPA 905.0							
Method: EPA 905.0	Batch ID: 2573130		Prepared: 02/29/24 00:00			Analyst: ST2	
Strontium-90	-0.370			pCi/L	1	02/29/24	U
Uncertainty: 0.672	MDA: 1.49						

<i>Surrogate(s)</i>							
<i>Strontium Carrier</i>	80.3%		25-125			02/29/24	

EPA 906.0							
Method: EPA 906.0	Batch ID: 2573168		Prepared: 03/07/24 00:00			Analyst: HB2	
Tritium	387			pCi/L	1	03/07/24	U
Uncertainty: 371	MDA: 619						

Sample Results LA Testing - EMSL Analytical, Inc. CA-ELAP #2283, Non-NELAP

Sample: AT-RES-7-S22
 4B20133-01 (Water) Sampled: 02/18/24 9:55 by Brown & Caldwell

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

EPA 100.2							
Method: EPA 100.2	Batch ID: 322405094		Prepared: 02/29/24 13:50			Analyst: _SUB	
Asbestos	ND		0.20	MFL	1	03/11/24	
Fibers:	Area: 0.064	Confidence: 0.00-0.74					

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

EPA 903.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2575902 - EPA 903.1										
Blank (1205664148-BLK)										
Radium-226	0.0504	1.00	pCi/L				-			U
Uncertainty: 0.140		MDA: 0.279								
Duplicate (1205664149 D)										
Radium-226	0.0650	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.0919		MDA: 0.152								
Matrix Spike (1205664150 S)										
Radium-226	12.1	1.00	pCi/L	14.4	<	84.2	80-120			
Uncertainty: 1.03		MDA: 0.196								
BS (1205664151-BKS)										
Radium-226	14.9	1.00	pCi/L	14.4		104	90-110			
Uncertainty: 1.43		MDA: 0.249								

Quality Control Results

EPA 904.0/ EPA 9320

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2586630 - EPA 904.0/ EPA 9320										
Blank (1205684964-BLK)										
Radium-228	0.242	1.00	pCi/L				-			U
Uncertainty: 0.251		MDA: 0.416								
Duplicate (1205684965 D)										
Radium-228	0.461	1.00	pCi/L		<		0-20	0	20	U
Uncertainty: 0.378		MDA: 0.609								
Matrix Spike (1205684966 S)										
Radium-228	12.3	1.00	pCi/L	16.6	<	74.3	70-130			
Uncertainty: 0.957		MDA: 0.511								
BS (1205684967-BKS)										
Radium-228	2.70	1.00	pCi/L	3.32		81.5	80-120			
Uncertainty: 0.642		MDA: 0.792								

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

EPA 905.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573130 - EPA 905.0										
Blank (1205659369-BLK) Prepared & Analyzed: 02/29/24										
Strontium-90	0.527	2.00	pCi/L			-				U
Uncertainty: 0.935		MDA: 1.63								
Duplicate (1205659370 D) Source: 656533001 Prepared & Analyzed: 02/29/24										
Strontium-90	-0.122	2.00	pCi/L		<	0-20	0	20		U
Uncertainty: 0.774		MDA: 1.54								
Matrix Spike (1205659371 S) Source: 656533001 Prepared & Analyzed: 02/29/24										
Strontium-90	34.3	2.00	pCi/L	29.1	<	118	80-120			
Uncertainty: 3.39		MDA: 2.60								
BS (1205659372-BKS) Prepared & Analyzed: 02/29/24										
Strontium-90	6.05	2.00	pCi/L	5.58		108	90-110			
Uncertainty: 1.53		MDA: 1.83								

Quality Control Results (Continued)

EPA 906.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: 2573168 - EPA 906.0										
Blank (1205659461-BLK) Prepared & Analyzed: 03/07/24										
Tritium	33.7	1000	pCi/L			-				U
Uncertainty: 355		MDA: 620								
Duplicate (1205659462 D) Source: 655486001 Prepared & Analyzed: 03/07/24										
Tritium	33.2	1000	pCi/L		<	0-20	0	20		U
Uncertainty: 356		MDA: 623								
Matrix Spike (1205659463 S) Source: 655486001 Prepared & Analyzed: 03/07/24										
Tritium	10500	1000	pCi/L	12000	<	87.8	80-120			
Uncertainty: 1310		MDA: 1540								
BS (1205659464-BKS) Prepared & Analyzed: 03/11/24										
Tritium	4850	1000	pCi/L	4830		100	90-110			
Uncertainty: 623		MDA: 702								

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Aldehydes and Carbonyl Compounds by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1809 - EPA 556										
Blank (W4B1809-BLK1)										
Formaldehyde	ND	0.86	2.0	ug/l						
<i>Surrogate(s)</i>										
2,4,5-TFAP	21.5			ug/l	20.0		108 70-130			
LCS (W4B1809-BS1)										
Formaldehyde	15.0	0.86	2.0	ug/l	20.0		75 70-130			
<i>Surrogate(s)</i>										
2,4,5-TFAP	23.3			ug/l	20.0		117 70-130			
LCS Dup (W4B1809-BSD1)										
Formaldehyde	15.7	0.86	2.0	ug/l	20.0		78 70-130	4	30	
<i>Surrogate(s)</i>										
2,4,5-TFAP	21.6			ug/l	20.0		108 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Carbamates and Urea Pesticides

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2										
Blank (W4B2044-BLK1)					Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	ND	0.82	2.0	ug/l						
Aldicarb	ND	0.58	2.0	ug/l						
Aldicarb sulfone	ND	0.73	2.0	ug/l						
Aldicarb sulfoxide	ND	1.0	2.0	ug/l						
Carbaryl	ND	1.0	2.0	ug/l						
Carbofuran	ND	1.0	2.0	ug/l						
Methiocarb	ND	1.0	2.0	ug/l						
Methomyl	ND	1.3	2.0	ug/l						
Oxamyl	ND	1.1	2.0	ug/l						
Propoxur (Baygon)	ND	1.4	2.0	ug/l						
<i>Surrogate(s)</i>										
BDMC	10.6			ug/l	10.0		106 70-130			
LCS (W4B2044-BS1)					Prepared: 02/25/24 Analyzed: 02/26/24					
3-Hydroxycarbofuran	11.0	0.82	2.0	ug/l	10.0		110 70-130			
Aldicarb	10.8	0.58	2.0	ug/l	10.0		108 70-130			
Aldicarb sulfone	8.12	0.73	2.0	ug/l	10.0		81 70-130			
Aldicarb sulfoxide	11.3	1.0	2.0	ug/l	10.0		113 70-130			
Carbaryl	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Carbofuran	11.2	1.0	2.0	ug/l	10.0		112 70-130			
Methiocarb	12.6	1.0	2.0	ug/l	10.0		126 70-130			
Methomyl	9.30	1.3	2.0	ug/l	10.0		93 70-130			
Oxamyl	8.16	1.1	2.0	ug/l	10.0		82 70-130			
Propoxur (Baygon)	11.6	1.4	2.0	ug/l	10.0		116 70-130			
<i>Surrogate(s)</i>										
BDMC	12.6			ug/l	10.0		126 70-130			
Matrix Spike (W4B2044-MS1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.5	0.82	2.0	ug/l	10.0	ND	125 70-130			
Aldicarb	12.9	0.58	2.0	ug/l	10.0	ND	129 70-130			
Aldicarb sulfone	9.57	0.73	2.0	ug/l	10.0	ND	96 70-130			
Aldicarb sulfoxide	12.2	1.0	2.0	ug/l	10.0	ND	122 70-130			
Carbaryl	12.4	1.0	2.0	ug/l	10.0	ND	124 70-130			
Carbofuran	11.0	1.0	2.0	ug/l	10.0	ND	110 70-130			
Methiocarb	13.0	1.0	2.0	ug/l	10.0	ND	130 70-130			
Methomyl	10.8	1.3	2.0	ug/l	10.0	ND	108 70-130			
Oxamyl	10.8	1.1	2.0	ug/l	10.0	ND	108 70-130			
Propoxur (Baygon)	12.1	1.4	2.0	ug/l	10.0	ND	121 70-130			
<i>Surrogate(s)</i>										
BDMC	11.8			ug/l	10.0		118 70-130			
Matrix Spike Dup (W4B2044-MSD1)					Source: 3L04005-04 Prepared & Analyzed: 02/25/24					
3-Hydroxycarbofuran	12.1	0.82	2.0	ug/l	10.0	ND	121 70-130	3	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Carbamates and Urea Pesticides (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2044 - EPA 531.2 (Continued)											
Matrix Spike Dup (W4B2044-MSD1)			Source: 3L04005-04			Prepared & Analyzed: 02/25/24					
Aldicarb	11.8	0.58	2.0	ug/l	10.0	ND	118	70-130	9	30	
Aldicarb sulfone	9.24	0.73	2.0	ug/l	10.0	ND	92	70-130	4	30	
Aldicarb sulfoxide	14.0	1.0	2.0	ug/l	10.0	ND	140	70-130	13	30	MS-01
Carbaryl	11.4	1.0	2.0	ug/l	10.0	ND	114	70-130	8	30	
Carbofuran	11.6	1.0	2.0	ug/l	10.0	ND	116	70-130	5	30	
Methiocarb	12.3	1.0	2.0	ug/l	10.0	ND	123	70-130	5	30	
Methomyl	10.7	1.3	2.0	ug/l	10.0	ND	107	70-130	1	30	
Oxamyl	10.6	1.1	2.0	ug/l	10.0	ND	106	70-130	2	30	
Propoxur (Baygon)	12.2	1.4	2.0	ug/l	10.0	ND	122	70-130	1	30	
<i>Surrogate(s)</i>											
BDMC	12.7			ug/l	10.0		127	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2149 - EPA 515.4										
Blank (W4B2149-BLK1)					Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	ND	0.065	0.20	ug/l						
2,4,5-TP (Silvex)	ND	0.026	0.20	ug/l						
2,4-D	ND	0.14	0.40	ug/l						
2,4-DB	0.233	0.19	2.0	ug/l						B-02, J
3,5-Dichlorobenzoic acid	ND	0.12	1.0	ug/l						
Acifluorfen	ND	0.030	0.40	ug/l						
Bentazon	ND	0.23	2.0	ug/l						
Dalapon	ND	0.11	0.40	ug/l						
DCPA	0.0458	0.029	0.10	ug/l						B-02, J
Dicamba	ND	0.15	0.60	ug/l						
Dichloroprop	ND	0.12	0.30	ug/l						
Dinoseb	ND	0.033	0.40	ug/l						
Pentachlorophenol	ND	0.014	0.20	ug/l						
Picloram	ND	0.050	0.60	ug/l						
<i>Surrogate(s)</i>										
2,4-DCAA	9.53			ug/l	10.0		95 70-130			
LCS (W4B2149-BS1)										
Prepared: 02/27/24 Analyzed: 03/12/24										
2,4,5-T	4.22	0.065	0.20	ug/l	4.00		106 70-130			
2,4,5-TP (Silvex)	4.19	0.026	0.20	ug/l	4.00		105 70-130			
2,4-D	8.44	0.14	0.40	ug/l	8.00		106 70-130			
2,4-DB	15.8	0.19	2.0	ug/l	16.0		99 70-130			
3,5-Dichlorobenzoic acid	8.45	0.12	1.0	ug/l	8.00		106 70-130			
Acifluorfen	4.15	0.030	0.40	ug/l	4.00		104 70-130			
Bentazon	16.2	0.23	2.0	ug/l	16.0		101 70-130			
Dalapon	8.26	0.11	0.40	ug/l	8.00		103 70-130			
DCPA	4.74	0.029	0.10	ug/l	4.00		119 70-130			
Dicamba	8.32	0.15	0.60	ug/l	8.00		104 70-130			
Dichloroprop	8.44	0.12	0.30	ug/l	8.00		105 70-130			
Dinoseb	4.25	0.033	0.40	ug/l	4.00		106 70-130			
Pentachlorophenol	4.24	0.014	0.20	ug/l	4.00		106 70-130			
Picloram	4.17	0.050	0.60	ug/l	4.00		104 70-130			
<i>Surrogate(s)</i>										
2,4-DCAA	10.5			ug/l	10.0		105 70-130			
Matrix Spike (W4B2149-MS1)										
Source: 4B15126-01					Prepared: 02/27/24 Analyzed: 03/12/24					
2,4,5-T	4.30	0.065	0.20	ug/l	4.00	ND	108 70-130			
2,4,5-TP (Silvex)	4.15	0.026	0.20	ug/l	4.00	ND	104 70-130			
2,4-D	8.41	0.14	0.40	ug/l	8.00	ND	105 70-130			
2,4-DB	16.5	0.19	2.0	ug/l	16.0	ND	103 70-130			
3,5-Dichlorobenzoic acid	8.22	0.12	1.0	ug/l	8.00	ND	103 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Acids Herbicides by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2149 - EPA 515.4 (Continued)											
Matrix Spike (W4B2149-MS1)			Source: 4B15126-01			Prepared: 02/27/24			Analyzed: 03/12/24		
Acifluorfen	4.22	0.030	0.40	ug/l	4.00	ND	105	70-130			
Bentazon	16.9	0.23	2.0	ug/l	16.0	ND	105	70-130			
Dalapon	8.38	0.11	0.40	ug/l	8.00	ND	105	70-130			
DCPA	5.25	0.029	0.10	ug/l	4.00	ND	131	70-130			MS-01
Dicamba	8.25	0.15	0.60	ug/l	8.00	ND	103	70-130			
Dichloroprop	8.27	0.12	0.30	ug/l	8.00	ND	103	70-130			
Dinoseb	4.18	0.033	0.40	ug/l	4.00	ND	105	70-130			
Pentachlorophenol	4.17	0.014	0.20	ug/l	4.00	ND	104	70-130			
Picloram	4.33	0.050	0.60	ug/l	4.00	ND	108	70-130			
<i>Surrogate(s)</i>											
2,4-DCAA	10.3			ug/l	10.0		103	70-130			
Matrix Spike Dup (W4B2149-MSD1)			Source: 4B15126-01			Prepared: 02/27/24			Analyzed: 03/12/24		
2,4,5-T	4.24	0.065	0.20	ug/l	4.00	ND	106	70-130	1	30	
2,4,5-TP (Silvex)	4.24	0.026	0.20	ug/l	4.00	ND	106	70-130	2	30	
2,4-D	8.48	0.14	0.40	ug/l	8.00	ND	106	70-130	0.8	30	
2,4-DB	15.8	0.19	2.0	ug/l	16.0	ND	98	70-130	5	30	
3,5-Dichlorobenzoic acid	8.47	0.12	1.0	ug/l	8.00	ND	106	70-130	3	30	
Acifluorfen	4.21	0.030	0.40	ug/l	4.00	ND	105	70-130	0.2	30	
Bentazon	16.6	0.23	2.0	ug/l	16.0	ND	103	70-130	2	30	
Dalapon	8.27	0.11	0.40	ug/l	8.00	ND	103	70-130	1	30	
DCPA	5.35	0.029	0.10	ug/l	4.00	ND	134	70-130	2	30	MS-01
Dicamba	8.44	0.15	0.60	ug/l	8.00	ND	105	70-130	2	30	
Dichloroprop	8.44	0.12	0.30	ug/l	8.00	ND	105	70-130	2	30	
Dinoseb	4.20	0.033	0.40	ug/l	4.00	ND	105	70-130	0.5	30	
Pentachlorophenol	4.26	0.014	0.20	ug/l	4.00	ND	107	70-130	2	30	
Picloram	4.23	0.050	0.60	ug/l	4.00	ND	106	70-130	2	30	
<i>Surrogate(s)</i>											
2,4-DCAA	10.6			ug/l	10.0		106	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1										
Blank (W4B2423-BLK1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	ND	0.0030	0.010	ug/l						
4,4'-DDE	ND	0.0040	0.010	ug/l						
4,4'-DDT	ND	0.0030	0.010	ug/l						
Aldrin	ND	0.0040	0.010	ug/l						
alpha-BHC	ND	0.0015	0.010	ug/l						
Aroclor 1016	ND	0.048	0.10	ug/l						
Aroclor 1221	ND	0.044	0.10	ug/l						
Aroclor 1232	ND	0.064	0.10	ug/l						
Aroclor 1242	ND	0.070	0.10	ug/l						
Aroclor 1248	ND	0.049	0.10	ug/l						
Aroclor 1254	ND	0.068	0.10	ug/l						
Aroclor 1260	ND	0.076	0.10	ug/l						
beta-BHC	ND	0.0045	0.010	ug/l						
Chlordane (tech)	ND	0.067	0.10	ug/l						
Chlorothalonil	ND	0.0040	0.050	ug/l						
delta-BHC	ND	0.0030	0.010	ug/l						
Dieldrin	ND	0.0030	0.010	ug/l						
Endosulfan I	ND	0.0030	0.010	ug/l						
Endosulfan II	ND	0.0019	0.010	ug/l						
Endosulfan sulfate	ND	0.0030	0.010	ug/l						
Endrin	ND	0.0030	0.010	ug/l						
Endrin aldehyde	ND	0.0040	0.010	ug/l						
gamma-BHC (Lindane)	ND	0.0030	0.010	ug/l						
Heptachlor	ND	0.0031	0.010	ug/l						
Heptachlor epoxide	ND	0.0019	0.010	ug/l						
Hexachlorobenzene	ND	0.0019	0.050	ug/l						
Hexachlorocyclopentadiene	ND	0.045	0.20	ug/l						
Methoxychlor	ND	0.0030	0.010	ug/l						
PCBs, Total	ND	0.048	0.50	ug/l						
Propachlor	ND	0.045	0.20	ug/l						
Toxaphene	ND	0.37	1.0	ug/l						
Trifluralin	ND	0.0043	0.010	ug/l						
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0981			ug/l	0.100		98 70-130			
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	0.0759	0.0030	0.010	ug/l	0.100		76 70-130			
4,4'-DDE	0.0595	0.0040	0.010	ug/l	0.100		60 70-130			Q-02
4,4'-DDT	0.112	0.0030	0.010	ug/l	0.100		112 70-130			
Aldrin	0.0182	0.0040	0.010	ug/l	0.100		18 50-130			Q-02

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Chlorinated Pesticides and/or PCBs by GC/ECD (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2423 - EPA 508.1 (Continued)										
LCS (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
alpha-BHC	0.0815	0.0015	0.010	ug/l	0.100		82 70-130			
beta-BHC	0.0856	0.0045	0.010	ug/l	0.100		86 70-130			
delta-BHC	0.0950	0.0030	0.010	ug/l	0.100		95 70-130			
Dieldrin	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
Endosulfan I	0.0679	0.0030	0.010	ug/l	0.100		68 70-130			BS-04
Endosulfan II	0.0729	0.0019	0.010	ug/l	0.100		73 70-130			
Endosulfan sulfate	0.0617	0.0030	0.010	ug/l	0.100		62 70-130			BS-04
Endrin	0.0936	0.0030	0.010	ug/l	0.100		94 70-130			
Endrin aldehyde	0.0464	0.0040	0.010	ug/l	0.100		46 70-130			Q-02
gamma-BHC (Lindane)	0.0843	0.0030	0.010	ug/l	0.100		84 70-130			
Heptachlor	0.0785	0.0031	0.010	ug/l	0.100		78 70-130			
Heptachlor epoxide	0.0847	0.0019	0.010	ug/l	0.100		85 70-130			
Methoxychlor	0.0761	0.0030	0.010	ug/l	0.100		76 70-130			
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0697			ug/l	0.100		70 70-130			
LCS (W4B2423-BS2)					Prepared: 02/29/24 Analyzed: 03/05/24					
Aroclor 1016	0.901	0.048	0.10	ug/l	1.00		90 70-130			
Aroclor 1260	0.620	0.076	0.10	ug/l	1.00		62 70-130			Q-02
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0795			ug/l	0.100		79 70-130			
LCS Dup (W4B2423-BS1)					Prepared: 02/29/24 Analyzed: 03/05/24					
4,4'-DDD	0.0889	0.0030	0.010	ug/l	0.100		89 70-130	16	30	
4,4'-DDE	0.0670	0.0040	0.010	ug/l	0.100		67 70-130	12	30	Q-02
4,4'-DDT	0.130	0.0030	0.010	ug/l	0.100		130 70-130	14	30	
Aldrin	0.0208	0.0040	0.010	ug/l	0.100		21 50-130	13	30	Q-02
alpha-BHC	0.0961	0.0015	0.010	ug/l	0.100		96 70-130	16	30	
beta-BHC	0.101	0.0045	0.010	ug/l	0.100		101 70-130	17	30	
delta-BHC	0.111	0.0030	0.010	ug/l	0.100		111 70-130	16	30	
Dieldrin	0.0902	0.0030	0.010	ug/l	0.100		90 70-130	17	30	
Endosulfan I	0.0798	0.0030	0.010	ug/l	0.100		80 70-130	16	30	
Endosulfan II	0.0839	0.0019	0.010	ug/l	0.100		84 70-130	14	30	
Endosulfan sulfate	0.0748	0.0030	0.010	ug/l	0.100		75 70-130	19	30	
Endrin	0.107	0.0030	0.010	ug/l	0.100		107 70-130	13	30	
Endrin aldehyde	0.0465	0.0040	0.010	ug/l	0.100		46 70-130	0.3	30	Q-02
gamma-BHC (Lindane)	0.0987	0.0030	0.010	ug/l	0.100		99 70-130	16	30	
Heptachlor	0.0931	0.0031	0.010	ug/l	0.100		93 70-130	17	30	
Heptachlor epoxide	0.0991	0.0019	0.010	ug/l	0.100		99 70-130	16	30	
Methoxychlor	0.0944	0.0030	0.010	ug/l	0.100		94 70-130	21	30	
<i>Surrogate(s)</i>										
4,4-Dibromobiphenyl	0.0972			ug/l	0.100		97 70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B2277 - EPA 335.4											
Blank (W4B2277-BLK1)											
Cyanide, Total	ND	1.5	5.0	ug/l							
LCS (W4B2277-BS1)											
Cyanide, Total	94.9	1.5	5.0	ug/l	100		95	90-110			
Matrix Spike (W4B2277-MS1)											
Cyanide, Total	212	1.5	5.0	ug/l	200	ND	106	90-110			
Matrix Spike Dup (W4B2277-MSD1)											
Cyanide, Total	218	1.5	5.0	ug/l	200	ND	109	90-110	3	20	

Quality Control Results

(Continued)

Diquat and Paraquat by EPA 549.2

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1814 - EPA 549.2											
Blank (W4B1814-BLK1)											
Diquat	ND	1.2	4.0	ug/l							
LCS (W4B1814-BS1)											
Diquat	20.1	1.2	4.0	ug/l	20.0		101	70-130			
Matrix Spike (W4B1814-MS1)											
Diquat	20.6	1.2	4.0	ug/l	20.0	ND	103	46-122			
Matrix Spike Dup (W4B1814-MSD1)											
Diquat	19.8	1.2	4.0	ug/l	20.0	ND	99	46-122	4	30	

Quality Control Results

(Continued)

Endothall By EPA 548.1

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W4B1800 - EPA 548.1											
Blank (W4B1800-BLK1)											
Endothall	ND	11	45	ug/l							
LCS (W4B1800-BS1)											
Endothall	99.5	11	45	ug/l	100		99	80-120			
Matrix Spike (W4B1800-MS1)											
Endothall	37.1	22	90	ug/l	200	ND	19	0.1-109			J
Matrix Spike Dup (W4B1800-MSD1)											
Endothall	32.4	22	90	ug/l	200	ND	16	0.1-109	14	30	J

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Explosives by EPA Method 8330

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1813 - EPA 8330A										
Blank (W4B1813-BLK1)					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	ND	0.31	1.0	ug/l						
1,3-Dinitrobenzene	ND	0.15	1.0	ug/l						
2,4,6-Trinitrotoluene	ND	0.34	1.0	ug/l						
2,4-Dinitrotoluene	ND	0.34	1.0	ug/l						
2,6-Dinitrotoluene	ND	0.20	1.0	ug/l						
2-Amino-4,6-Dinitrotoluene	ND	0.35	1.0	ug/l						
2-Nitrotoluene	ND	0.21	1.0	ug/l						
3-Nitrotoluene	ND	0.37	1.0	ug/l						
4-Amino-2,6-Dinitrotoluene	ND	0.17	1.0	ug/l						
4-Nitrotoluene	ND	0.27	1.0	ug/l						
HMX	ND	0.30	1.0	ug/l						
Nitrobenzene	ND	0.16	1.0	ug/l						
RDX	ND	0.33	1.0	ug/l						
Tetryl	ND	0.45	1.0	ug/l						
LCS (W4B1813-BS1)										
					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	2.83	0.31	1.0	ug/l	2.50	113	70-130			
1,3-Dinitrobenzene	2.69	0.15	1.0	ug/l	2.50	107	70-130			
2,4,6-Trinitrotoluene	2.93	0.34	1.0	ug/l	2.50	117	70-130			
2,4-Dinitrotoluene	2.56	0.34	1.0	ug/l	2.50	102	70-130			
2,6-Dinitrotoluene	2.52	0.20	1.0	ug/l	2.50	101	70-130			
2-Amino-4,6-Dinitrotoluene	2.62	0.35	1.0	ug/l	2.50	105	70-130			
2-Nitrotoluene	2.08	0.21	1.0	ug/l	2.50	83	70-130			
3-Nitrotoluene	2.04	0.37	1.0	ug/l	2.50	82	70-130			
4-Amino-2,6-Dinitrotoluene	2.83	0.17	1.0	ug/l	2.50	113	70-130			
4-Nitrotoluene	2.13	0.27	1.0	ug/l	2.50	85	70-130			
HMX	2.81	0.30	1.0	ug/l	2.50	112	70-130			
Nitrobenzene	2.28	0.16	1.0	ug/l	2.50	91	70-130			
RDX	2.86	0.33	1.0	ug/l	2.50	114	70-130			
Tetryl	2.50	0.45	1.0	ug/l	2.50	100	70-130			
LCS Dup (W4B1813-BSD1)										
					Prepared: 02/22/24 Analyzed: 03/13/24					
1,3,5-Trinitrobenzene	2.58	0.31	1.0	ug/l	2.50	103	70-130	9	25	
1,3-Dinitrobenzene	2.44	0.15	1.0	ug/l	2.50	98	70-130	10	25	
2,4,6-Trinitrotoluene	2.65	0.34	1.0	ug/l	2.50	106	70-130	10	25	
2,4-Dinitrotoluene	2.35	0.34	1.0	ug/l	2.50	94	70-130	9	25	
2,6-Dinitrotoluene	2.18	0.20	1.0	ug/l	2.50	87	70-130	14	25	
2-Amino-4,6-Dinitrotoluene	2.36	0.35	1.0	ug/l	2.50	94	70-130	11	25	
2-Nitrotoluene	1.88	0.21	1.0	ug/l	2.50	75	70-130	10	25	
3-Nitrotoluene	2.03	0.37	1.0	ug/l	2.50	81	70-130	0.4	25	
4-Amino-2,6-Dinitrotoluene	2.37	0.17	1.0	ug/l	2.50	95	70-130	18	25	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Explosives by EPA Method 8330 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1813 - EPA 8330A (Continued)											
LCS Dup (W4B1813-BSD1)					Prepared: 02/22/24 Analyzed: 03/13/24						
4-Nitrotoluene	1.80	0.27	1.0	ug/l	2.50	72	70-130	17	25		
HMX	2.48	0.30	1.0	ug/l	2.50	99	70-130	12	25		
Nitrobenzene	1.87	0.16	1.0	ug/l	2.50	75	70-130	19	25		
RDX	2.48	0.33	1.0	ug/l	2.50	99	70-130	14	25		
Tetryl	2.51	0.45	1.0	ug/l	2.50	100	70-130	0.4	25		

Quality Control Results

(Continued)

Glycols by GC/FID

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1920 - EPA 8015B											
Blank (W4B1920-BLK1)					Prepared & Analyzed: 02/22/24						
Ethylene glycol	ND	4.7	10	mg/l							
<i>Surrogate(s)</i>											
1-Propanol	127			mg/l	100		127	50-150			
LCS (W4B1920-BS1)					Prepared & Analyzed: 02/22/24						
Ethylene glycol	91.4	4.7	10	mg/l	100		91	70-130			
<i>Surrogate(s)</i>											
1-Propanol	93.1			mg/l	100		93	50-150			
Matrix Spike (W4B1920-MS1)					Source: 4B20063-06		Prepared & Analyzed: 02/22/24				
Ethylene glycol	94.0	4.7	10	mg/l	100	ND	94	57-127			
<i>Surrogate(s)</i>											
1-Propanol	85.5			mg/l	100		85	50-150			
Matrix Spike Dup (W4B1920-MSD1)					Source: 4B20063-06		Prepared & Analyzed: 02/22/24				
Ethylene glycol	88.8	4.7	10	mg/l	100	ND	89	57-127	6	25	
<i>Surrogate(s)</i>											
1-Propanol	95.6			mg/l	100		96	50-150			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Glyphosate by EPA 547

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2068 - EPA 547											
Blank (W4B2068-BLK1) Prepared & Analyzed: 02/26/24											
Glyphosate	ND	1.8	5.0	ug/l							
LCS (W4B2068-BS1) Prepared & Analyzed: 02/26/24											
Glyphosate	24.1	1.8	5.0	ug/l	25.0		96	70-130			
Matrix Spike (W4B2068-MS1) Prepared & Analyzed: 02/26/24											
		Source: 3L04005-04									
Glyphosate	26.5	1.8	5.0	ug/l	25.0	ND	106	41-149			
Matrix Spike (W4B2068-MS2) Prepared & Analyzed: 02/26/24											
		Source: 3L04005-05									
Glyphosate	30.0	1.8	5.0	ug/l	25.0	ND	120	41-149			
Matrix Spike Dup (W4B2068-MSD1) Prepared & Analyzed: 02/26/24											
		Source: 3L04005-04									
Glyphosate	24.9	1.8	5.0	ug/l	25.0	ND	100	41-149	6	30	
Matrix Spike Dup (W4B2068-MSD2) Prepared & Analyzed: 02/26/24											
		Source: 3L04005-05									
Glyphosate	28.5	1.8	5.0	ug/l	25.0	ND	114	41-149	5	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Haloacetic Acids (HAAs) by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1637 - EPA 552.3											
Blank (W4B1637-BLK1)						Prepared: 02/21/24 Analyzed: 03/04/24					
Dibromoacetic acid (dbaa)	ND	0.28	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	0.29	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	0.34	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	0.31	2.0	ug/l							
Trichloroacetic acid (tcaa)	ND	0.29	1.0	ug/l							
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.4			ug/l	10.0		104	70-130			
LCS (W4B1637-BS1)						Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	10.7	0.28	1.0	ug/l	10.0		107	70-130			
Dichloroacetic acid (dcaa)	10.3	0.29	1.0	ug/l	10.0		103	70-130			
Monobromoacetic acid (mbaa)	10.0	0.34	1.0	ug/l	10.0		100	70-130			
Monochloroacetic acid (mcaa)	9.81	0.31	2.0	ug/l	10.0		98	70-130			
Trichloroacetic acid (tcaa)	10.5	0.29	1.0	ug/l	10.0		105	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.0			ug/l	10.0		100	70-130			
Matrix Spike (W4B1637-MS1)						Source: 4B02004-10 Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	11.3	0.28	1.0	ug/l	10.0	0.528	108	70-130			
Dichloroacetic acid (dcaa)	11.1	0.29	1.0	ug/l	10.0	0.607	105	70-130			
Monobromoacetic acid (mbaa)	10.2	0.34	1.0	ug/l	10.0	ND	102	70-130			
Monochloroacetic acid (mcaa)	10.0	0.31	2.0	ug/l	10.0	ND	100	70-130			
Trichloroacetic acid (tcaa)	9.87	0.29	1.0	ug/l	10.0	ND	99	70-130			
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.1			ug/l	10.0		101	70-130			
Matrix Spike Dup (W4B1637-MSD1)						Source: 4B02004-10 Prepared: 02/21/24 Analyzed: 03/05/24					
Dibromoacetic acid (dbaa)	10.8	0.28	1.0	ug/l	10.0	0.528	103	70-130	4	30	
Dichloroacetic acid (dcaa)	10.6	0.29	1.0	ug/l	10.0	0.607	100	70-130	4	30	
Monobromoacetic acid (mbaa)	9.55	0.34	1.0	ug/l	10.0	ND	96	70-130	6	30	
Monochloroacetic acid (mcaa)	10.4	0.31	2.0	ug/l	10.0	ND	104	70-130	3	30	
Trichloroacetic acid (tcaa)	9.70	0.29	1.0	ug/l	10.0	ND	97	70-130	2	30	
<i>Surrogate(s)</i>											
2-Bromobutyric acid	10.5			ug/l	10.0		105	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
Batch: W4B2302 - EPA 245.1											
Blank (W4B2302-BLK1)											
Mercury, Total	ND	0.037	0.050	ug/l							
					Prepared: 02/28/24 Analyzed: 03/01/24						
LCS (W4B2302-BS1)											
Mercury, Total	0.954	0.037	0.050	ug/l	1.00		95	85-115			
					Prepared: 02/28/24 Analyzed: 03/01/24						
Matrix Spike (W4B2302-MS1)											
Mercury, Total	0.968	0.037	0.050	ug/l	1.00	ND	97	70-130			
					Prepared: 02/28/24 Analyzed: 03/01/24						
Matrix Spike (W4B2302-MS2)											
Mercury, Total	0.971	0.037	0.050	ug/l	1.00	ND	97	70-130			
					Prepared: 02/28/24 Analyzed: 03/01/24						
Matrix Spike Dup (W4B2302-MSD1)											
Mercury, Total	0.951	0.037	0.050	ug/l	1.00	ND	95	70-130	2	20	
					Prepared: 02/28/24 Analyzed: 03/01/24						
Matrix Spike Dup (W4B2302-MSD2)											
Mercury, Total	0.962	0.037	0.050	ug/l	1.00	ND	96	70-130	0.9	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Nitrosamines by CI GC/MS/MS, EPA 521

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2292 - EPA 521											
Blank (W4B2292-BLK1)						Prepared: 02/28/24 Analyzed: 03/04/24					
N-Nitrosodiethylamine	ND	0.66	2.0	ng/l							
N-Nitrosodimethylamine	ND	1.3	2.0	ng/l							
N-Nitrosodi-n-butylamine	ND	0.53	2.0	ng/l							
N-Nitrosodi-n-propylamine	ND	0.62	2.0	ng/l							
N-Nitrosomethylethylamine	ND	0.54	2.0	ng/l							
N-Nitrosomorpholine	ND	0.68	2.0	ng/l							
N-Nitrosopiperidine	ND	0.65	2.0	ng/l							
N-Nitrosopyrrolidine	ND	0.62	2.0	ng/l							
<i>Surrogate(s)</i>											
NDMA-d6	22.7			ng/l	25.0		91	70-130			
LCS (W4B2292-BS1)						Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	1.66	0.66	2.0	ng/l	2.00		83	50-150			J
N-Nitrosodimethylamine	2.26	1.3	2.0	ng/l	2.00		113	50-150			
N-Nitrosodi-n-butylamine	1.44	0.53	2.0	ng/l	2.00		72	50-150			J
N-Nitrosodi-n-propylamine	1.61	0.62	2.0	ng/l	2.00		80	50-150			J
N-Nitrosomethylethylamine	1.89	0.54	2.0	ng/l	2.00		95	50-150			J
N-Nitrosomorpholine	1.94	0.68	2.0	ng/l	2.00		97	50-150			J
N-Nitrosopiperidine	1.83	0.65	2.0	ng/l	2.00		91	50-150			J
N-Nitrosopyrrolidine	1.81	0.62	2.0	ng/l	2.00		90	50-150			J
<i>Surrogate(s)</i>											
NDMA-d6	24.6			ng/l	25.0		99	70-130			
Matrix Spike (W4B2292-MS1)						Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	1.85	0.66	2.0	ng/l	2.05	ND	90	50-150			J
N-Nitrosodimethylamine	2.08	1.3	2.0	ng/l	2.05	ND	101	50-150			
N-Nitrosodi-n-butylamine	1.54	0.53	2.0	ng/l	2.05	ND	75	50-150			J
N-Nitrosodi-n-propylamine	1.55	0.62	2.0	ng/l	2.05	ND	75	50-150			J
N-Nitrosomethylethylamine	2.03	0.54	2.0	ng/l	2.05	ND	99	50-150			
N-Nitrosomorpholine	1.87	0.68	2.0	ng/l	2.05	ND	91	50-150			J
N-Nitrosopiperidine	2.00	0.65	2.0	ng/l	2.05	ND	98	50-150			
N-Nitrosopyrrolidine	1.96	0.62	2.0	ng/l	2.05	ND	96	50-150			J
<i>Surrogate(s)</i>											
NDMA-d6	25.7			ng/l	25.7		100	70-130			
Matrix Spike Dup (W4B2292-MSD1)						Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24					
N-Nitrosodiethylamine	2.01	0.66	2.0	ng/l	2.05	ND	98	50-150	8	50	
N-Nitrosodimethylamine	2.03	1.3	2.0	ng/l	2.05	ND	99	50-150	2	50	
N-Nitrosodi-n-butylamine	1.73	0.53	2.0	ng/l	2.05	ND	84	50-150	12	50	J
N-Nitrosodi-n-propylamine	1.93	0.62	2.0	ng/l	2.05	ND	94	50-150	22	50	J
N-Nitrosomethylethylamine	2.16	0.54	2.0	ng/l	2.05	ND	105	50-150	6	50	
N-Nitrosomorpholine	1.98	0.68	2.0	ng/l	2.05	ND	96	50-150	5	50	J
N-Nitrosopiperidine	2.10	0.65	2.0	ng/l	2.05	ND	102	50-150	5	50	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Nitrosamines by CI GC/MS/MS, EPA 521 (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2292 - EPA 521 (Continued)											
Matrix Spike Dup (W4B2292-MSD1)											
Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24											
N-Nitrosopyrrolidine	1.95	0.62	2.0	ng/l	2.05	ND	95	50-150	0.6	50	J
<i>Surrogate(s)</i>											
NDMA-d6	25.5			ng/l	25.6		99	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0700 - EPA 533											
Blank (W4C0700-BLK1)						Prepared: 03/08/24 Analyzed: 03/12/24					
11CI-PF3OUdS	ND	0.89	2.0	ng/l							
4:2 FTS	ND	0.83	2.0	ng/l							
6:2 FTS	ND	0.78	2.0	ng/l							
8:2 FTS	ND	0.68	2.0	ng/l							
9CI-PF3ONS	ND	0.84	2.0	ng/l							
ADONA	ND	0.71	2.0	ng/l							
HFPO-DA	ND	0.92	2.0	ng/l							
NFDHA	ND	0.75	2.0	ng/l							
PFBA	ND	0.61	2.0	ng/l							
PFBS	ND	0.46	2.0	ng/l							
PFDA	ND	0.64	2.0	ng/l							
PFDoA	ND	0.65	2.0	ng/l							
PFEESA	ND	0.45	2.0	ng/l							
PFHpA	ND	0.65	2.0	ng/l							
PFHpS	ND	0.60	2.0	ng/l							
PFHxA	ND	0.72	2.0	ng/l							
PFHxS	ND	0.99	2.0	ng/l							
PFMBA	ND	0.62	2.0	ng/l							
PFMPA	ND	0.42	2.0	ng/l							
PFNA	ND	0.88	2.0	ng/l							
PFOA	ND	0.92	2.0	ng/l							
PFOS	ND	0.68	2.0	ng/l							
PFPeA	ND	0.45	2.0	ng/l							
PFPeS	ND	0.50	2.0	ng/l							
PFUnA	ND	0.59	2.0	ng/l							
<i>Surrogate(s)</i>											
13C2-4:2 FTS	40.5			ng/l	40.0		101	50-200			
13C2-6:2 FTS	40.3			ng/l	40.0		101	50-200			
13C2-8:2 FTS	40.5			ng/l	40.0		101	50-200			
13C2-PFDoA	10.2			ng/l	10.0		102	50-200			
13C3-PFBS	11.4			ng/l	10.0		114	50-200			
13C3-PFHxS	11.4			ng/l	10.0		114	50-200			
13C4-PFBA	11.1			ng/l	10.0		111	50-200			
13C4-PFHpA	10.5			ng/l	10.0		105	50-200			
13C5-PFHxA	10.6			ng/l	10.0		106	50-200			
13C5-PFPeA	11.0			ng/l	10.0		110	50-200			
13C6-PFDA	10.1			ng/l	10.0		101	50-200			
13C7-PFUnA	10.1			ng/l	10.0		101	50-200			
13C8-PFOA	10.3			ng/l	10.0		103	50-200			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0700 - EPA 533 (Continued)											
Blank (W4C0700-BLK1)						Prepared: 03/08/24 Analyzed: 03/12/24					
<i>Surrogate(s)</i>											
13C8-PFOS	11.5			ng/l	10.0		115	50-200			
13C9-PFNA	10.3			ng/l	10.0		103	50-200			
HFPO-DA-13C3	10.2			ng/l	10.0		102	50-200			
LCS (W4C0700-BS1)						Prepared: 03/08/24 Analyzed: 03/12/24					
11CI-PF3OUdS	58.1	0.89	2.0	ng/l	60.0		97	70-130			
4:2 FTS	54.5	0.83	2.0	ng/l	60.0		91	70-130			
6:2 FTS	60.4	0.78	2.0	ng/l	60.0		101	70-130			
8:2 FTS	57.5	0.68	2.0	ng/l	60.0		96	70-130			
9CI-PF3ONS	58.6	0.84	2.0	ng/l	60.0		98	70-130			
ADONA	60.2	0.71	2.0	ng/l	60.0		100	70-130			
HFPO-DA	59.3	0.92	2.0	ng/l	60.0		99	70-130			
NFDHA	55.9	0.75	2.0	ng/l	60.0		93	70-130			
PFBA	59.6	0.61	2.0	ng/l	60.0		99	70-130			
PFBS	57.6	0.46	2.0	ng/l	60.0		96	70-130			
PFDA	60.6	0.64	2.0	ng/l	60.0		101	70-130			
PFDoA	59.3	0.65	2.0	ng/l	60.0		99	70-130			
PFEESA	57.3	0.45	2.0	ng/l	60.0		96	70-130			
PFHpA	59.7	0.65	2.0	ng/l	60.0		100	70-130			
PFHpS	59.9	0.60	2.0	ng/l	60.0		100	70-130			
PFHxA	56.3	0.72	2.0	ng/l	60.0		94	70-130			
PFHxS	59.7	0.99	2.0	ng/l	60.0		100	70-130			
PFMBA	58.4	0.62	2.0	ng/l	60.0		97	70-130			
PFMPA	59.6	0.42	2.0	ng/l	60.0		99	70-130			
PFNA	59.1	0.88	2.0	ng/l	60.0		99	70-130			
PFOA	61.4	0.92	2.0	ng/l	60.0		102	70-130			
PFOS	58.6	0.68	2.0	ng/l	60.0		98	70-130			
PFPeA	59.3	0.45	2.0	ng/l	60.0		99	70-130			
PFPeS	60.3	0.50	2.0	ng/l	60.0		101	70-130			
PFUnA	58.1	0.59	2.0	ng/l	60.0		97	70-130			
<i>Surrogate(s)</i>											
13C2-4:2 FTS	41.2			ng/l	40.0		103	50-200			
13C2-6:2 FTS	40.8			ng/l	40.0		102	50-200			
13C2-8:2 FTS	41.3			ng/l	40.0		103	50-200			
13C2-PFDoA	10.7			ng/l	10.0		107	50-200			
13C3-PFBS	12.0			ng/l	10.0		120	50-200			
13C3-PFHxS	11.4			ng/l	10.0		114	50-200			
13C4-PFBA	11.4			ng/l	10.0		114	50-200			
13C4-PFHpA	10.5			ng/l	10.0		105	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0700 - EPA 533 (Continued)											
LCS (W4C0700-BS1)						Prepared: 03/08/24 Analyzed: 03/12/24					
<i>Surrogate(s)</i>											
13C5-PFHxA	11.3			ng/l	10.0		113	50-200			
13C5-PFPeA	11.3			ng/l	10.0		113	50-200			
13C6-PFDA	10.4			ng/l	10.0		104	50-200			
13C7-PFUnA	10.9			ng/l	10.0		109	50-200			
13C8-PFOA	10.4			ng/l	10.0		104	50-200			
13C8-PFOS	11.2			ng/l	10.0		112	50-200			
13C9-PFNA	10.5			ng/l	10.0		105	50-200			
HFPO-DA-13C3	10.6			ng/l	10.0		106	50-200			
LCS Dup (W4C0700-BSD1)						Prepared: 03/08/24 Analyzed: 03/12/24					
11CI-PF3OUdS	57.4	0.89	2.0	ng/l	60.0		96	70-130	1	30	
4:2 FTS	50.7	0.83	2.0	ng/l	60.0		84	70-130	7	30	
6:2 FTS	58.9	0.78	2.0	ng/l	60.0		98	70-130	3	30	
8:2 FTS	59.6	0.68	2.0	ng/l	60.0		99	70-130	4	30	
9CI-PF3ONS	56.3	0.84	2.0	ng/l	60.0		94	70-130	4	30	
ADONA	59.3	0.71	2.0	ng/l	60.0		99	70-130	2	30	
HFPO-DA	60.6	0.92	2.0	ng/l	60.0		101	70-130	2	30	
NFDHA	57.8	0.75	2.0	ng/l	60.0		96	70-130	3	30	
PFBA	58.2	0.61	2.0	ng/l	60.0		97	70-130	2	30	
PFBS	58.9	0.46	2.0	ng/l	60.0		98	70-130	2	30	
PFDA	60.9	0.64	2.0	ng/l	60.0		102	70-130	0.5	30	
PFDoA	62.0	0.65	2.0	ng/l	60.0		103	70-130	4	30	
PFEESA	58.9	0.45	2.0	ng/l	60.0		98	70-130	3	30	
PFHpA	59.3	0.65	2.0	ng/l	60.0		99	70-130	0.7	30	
PFHpS	58.2	0.60	2.0	ng/l	60.0		97	70-130	3	30	
PFHxA	58.3	0.72	2.0	ng/l	60.0		97	70-130	4	30	
PFHxS	55.1	0.99	2.0	ng/l	60.0		92	70-130	8	30	
PFMBA	59.3	0.62	2.0	ng/l	60.0		99	70-130	1	30	
PFMPA	57.8	0.42	2.0	ng/l	60.0		96	70-130	3	30	
PFNA	58.9	0.88	2.0	ng/l	60.0		98	70-130	0.4	30	
PFOA	59.6	0.92	2.0	ng/l	60.0		99	70-130	3	30	
PFOS	57.4	0.68	2.0	ng/l	60.0		96	70-130	2	30	
PFPeA	59.2	0.45	2.0	ng/l	60.0		99	70-130	0.1	30	
PFPeS	55.6	0.50	2.0	ng/l	60.0		93	70-130	8	30	
PFUnA	61.9	0.59	2.0	ng/l	60.0		103	70-130	6	30	
<i>Surrogate(s)</i>											
13C2-4:2 FTS	41.4			ng/l	40.0		104	50-200			
13C2-6:2 FTS	39.4			ng/l	40.0		98	50-200			
13C2-8:2 FTS	38.9			ng/l	40.0		97	50-200			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by LC-MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0700 - EPA 533 (Continued)											
LCS Dup (W4C0700-BSD1)						Prepared: 03/08/24 Analyzed: 03/12/24					
<i>Surrogate(s)</i>											
13C2-PFDoA	10.7			ng/l	10.0		107	50-200			
13C3-PFBS	11.2			ng/l	10.0		112	50-200			
13C3-PFHxS	11.7			ng/l	10.0		117	50-200			
13C4-PFBA	11.3			ng/l	10.0		113	50-200			
13C4-PFHpA	11.0			ng/l	10.0		110	50-200			
13C5-PFHxA	11.2			ng/l	10.0		112	50-200			
13C5-PFPeA	11.1			ng/l	10.0		111	50-200			
13C6-PFDA	10.7			ng/l	10.0		107	50-200			
13C7-PFUnA	10.3			ng/l	10.0		103	50-200			
13C8-PFOA	11.1			ng/l	10.0		111	50-200			
13C8-PFOS	11.2			ng/l	10.0		112	50-200			
13C9-PFNA	10.8			ng/l	10.0		108	50-200			
HFPO-DA-13C3	10.7			ng/l	10.0		107	50-200			

Quality Control Results

(Continued)

Perchlorate by EPA 314.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2296 - EPA 314.0											
Blank (W4B2296-BLK1)						Prepared & Analyzed: 02/28/24					
Perchlorate	ND	0.26	1.0	ug/l							
LCS (W4B2296-BS1)						Prepared & Analyzed: 02/28/24					
Perchlorate	10.0	0.26	1.0	ug/l	10.0		100	85-115			
Matrix Spike (W4B2296-MS1)						Source: 4B20097-01 Prepared & Analyzed: 02/28/24					
Perchlorate	10.0	0.26	1.0	ug/l	10.0	0.621	94	80-120			
Matrix Spike Dup (W4B2296-MSD1)						Source: 4B20097-01 Prepared & Analyzed: 02/28/24					
Perchlorate	10.1	0.26	1.0	ug/l	10.0	0.621	95	80-120	1	15	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results (Continued)

Radiological Parameters by APHA/EPA Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C1302 - EPA 900.0											
Blank (W4C1302-BLK1)											
Gross Alpha	-1.14			pCi/L							
Counting Uncertainty:	0.437	MDA:	0.684								
Gross Beta	-0.861			pCi/L							
Counting Uncertainty:	0.484	MDA:	0.78								
LCS (W4C1302-BS1)											
Gross Alpha	8.51			pCi/L	12.0		71	60-110			
Counting Uncertainty:	0.659	MDA:	0.684								
Gross Beta	13.6			pCi/L	16.0		85	72-123			
Counting Uncertainty:	0.742	MDA:	0.78								
Matrix Spike (W4C1302-MS1) Source: 4A22022-01											
Gross Alpha	7.76			pCi/L	12.0	1.81	50	28-124			
Counting Uncertainty:	0.823	MDA:	0.954								
Gross Beta	15.7			pCi/L	16.0	2.08	85	61-125			
Counting Uncertainty:	0.819	MDA:	0.901								
Matrix Spike Dup (W4C1302-MSD1) Source: 4A22022-01											
Gross Alpha	7.22			pCi/L	12.0	1.81	45	28-124	7	30	
Counting Uncertainty:	0.816	MDA:	0.956								
Gross Beta	14.6			pCi/L	16.0	2.08	79	61-125	7	30	
Counting Uncertainty:	0.859	MDA:	1.017								

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2											
Blank (W4B2424-BLK1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	ND	0.063	0.10	ug/l							
Atrazine	ND	0.042	0.10	ug/l							
Benzo (a) pyrene	ND	0.045	0.10	ug/l							
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							
Bromacil	ND	0.24	0.50	ug/l							
Butachlor	ND	0.040	0.10	ug/l							
Captan	ND	0.32	1.0	ug/l							
Chlorpropham	ND	0.040	0.10	ug/l							
Diazinon	ND	0.022	0.10	ug/l							
Dimethoate	ND	0.041	0.20	ug/l							
Diphenamid	ND	0.030	0.10	ug/l							
Disulfoton	ND	0.11	0.20	ug/l							
EPTC	ND	0.020	0.10	ug/l							
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							
Metolachlor	ND	0.030	0.10	ug/l							
Metribuzin	ND	0.030	0.10	ug/l							
Molinate	ND	0.030	0.10	ug/l							
Prometryn	ND	0.030	0.10	ug/l							
Simazine	ND	0.058	0.10	ug/l							
Terbacil	ND	0.090	2.0	ug/l							
Thiobencarb	ND	0.069	0.10	ug/l							
Trithion	ND	0.054	0.10	ug/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00		99	70-130			
Perylene-d12	3.66			ug/l	5.00		73	50-120			
Triphenyl phosphate	4.65			ug/l	5.00		93	70-130			
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	ND	0.063	0.10	ug/l							QC-2
Atrazine	ND	0.042	0.10	ug/l							QC-2
Benzo (a) pyrene	ND	0.045	0.10	ug/l							QC-2
Bis(2-ethylhexyl)adipate	ND	0.38	5.0	ug/l							QC-2
Bis(2-ethylhexyl)phthalate	ND	0.41	3.0	ug/l							QC-2
Bromacil	ND	0.24	0.50	ug/l							QC-2
Butachlor	ND	0.040	0.10	ug/l							QC-2
Captan	ND	0.32	1.0	ug/l							QC-2
Chlorpropham	ND	0.040	0.10	ug/l							QC-2
Diazinon	ND	0.022	0.10	ug/l							QC-2
Dimethoate	ND	0.041	0.20	ug/l							QC-2

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
 05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
Blank (W4B2424-BLK2)						Prepared: 02/29/24 Analyzed: 03/23/24					
Diphenamid	ND	0.030	0.10	ug/l							QC-2
Disulfoton	ND	0.11	0.20	ug/l							QC-2
EPTC	ND	0.020	0.10	ug/l							QC-2
Hexachlorocyclopentadiene	ND	0.092	1.0	ug/l							QC-2
Metolachlor	ND	0.030	0.10	ug/l							QC-2
Metribuzin	ND	0.030	0.10	ug/l							QC-2
Molinate	ND	0.030	0.10	ug/l							QC-2
Prometryn	ND	0.030	0.10	ug/l							QC-2
Simazine	ND	0.058	0.10	ug/l							QC-2
Terbacil	ND	0.090	2.0	ug/l							QC-2
Thiobencarb	ND	0.069	0.10	ug/l							QC-2
Trithion	ND	0.054	0.10	ug/l							QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.84			ug/l	5.00		97	70-130			QC-2
Perylene-d12	4.14			ug/l	5.00		83	50-120			QC-2
Triphenyl phosphate	4.92			ug/l	5.00		98	70-130			QC-2
LCS (W4B2424-BS1)						Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	9.57	0.063	0.10	ug/l	7.50		128	70-130			
Atrazine	4.30	0.042	0.10	ug/l	5.00		86	70-130			
Benzo (a) pyrene	4.04	0.045	0.10	ug/l	5.00		81	60-130			
Bis(2-ethylhexyl)adipate	8.19	0.38	5.0	ug/l	5.00		164	70-130			Q-08
Bis(2-ethylhexyl)phthalate	5.93	0.41	3.0	ug/l	5.00		119	70-130			
Bromacil	6.45	0.24	0.50	ug/l	5.00		129	70-130			
Butachlor	5.81	0.040	0.10	ug/l	5.00		116	70-130			
Captan	5.59	0.32	1.0	ug/l	5.00		112	70-130			
Chlorpropham	5.18	0.040	0.10	ug/l	5.00		104	70-130			
Diazinon	3.38	0.022	0.10	ug/l	5.00		68	50-120			
Dimethoate	3.81	0.041	0.20	ug/l	5.00		76	50-120			
Diphenamid	5.69	0.030	0.10	ug/l	5.00		114	70-130			
Disulfoton	3.98	0.11	0.20	ug/l	5.00		80	50-120			
EPTC	4.45	0.020	0.10	ug/l	5.00		89	70-130			
Hexachlorocyclopentadiene	2.20	0.092	1.0	ug/l	2.50		88	33-106			
Metolachlor	6.29	0.030	0.10	ug/l	5.00		126	60-130			
Metribuzin	5.45	0.030	0.10	ug/l	5.00		109	50-120			
Molinate	3.79	0.030	0.10	ug/l	5.00		76	70-130			
Prometryn	3.05	0.030	0.10	ug/l	5.00		61	30-120			
Simazine	4.66	0.058	0.10	ug/l	5.00		93	60-130			
Terbacil	5.12	0.090	2.0	ug/l	5.00		102	70-130			
Thiobencarb	6.72	0.069	0.10	ug/l	5.00		134	70-130			Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatiles Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS (W4B2424-BS1)										
					Prepared: 02/29/24 Analyzed: 03/09/24					
Trithion	6.14	0.054	0.10	ug/l	5.00	123	70-130			
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	2.62			ug/l	5.00	52	70-130			S-11
Perylene-d12	4.14			ug/l	5.00	83	50-120			
Triphenyl phosphate	4.38			ug/l	5.00	88	70-130			
LCS (W4B2424-BS2)										
					Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	7.14	0.063	0.10	ug/l	7.50	95	70-130			QC-2
Atrazine	4.76	0.042	0.10	ug/l	5.00	95	70-130			QC-2
Benzo (a) pyrene	4.07	0.045	0.10	ug/l	5.00	81	60-130			QC-2
Bis(2-ethylhexyl)adipate	5.27	0.38	5.0	ug/l	5.00	105	70-130			QC-2
Bis(2-ethylhexyl)phthalate	4.97	0.41	3.0	ug/l	5.00	99	70-130			QC-2
Bromacil	4.80	0.24	0.50	ug/l	5.00	96	70-130			QC-2
Butachlor	4.38	0.040	0.10	ug/l	5.00	88	70-130			QC-2
Captan	4.76	0.32	1.0	ug/l	5.00	95	70-130			QC-2
Chlorpropham	4.70	0.040	0.10	ug/l	5.00	94	70-130			QC-2
Diazinon	3.01	0.022	0.10	ug/l	5.00	60	50-120			QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00	76	50-120			QC-2
Diphenamid	4.98	0.030	0.10	ug/l	5.00	100	70-130			QC-2
Disulfoton	4.23	0.11	0.20	ug/l	5.00	85	50-120			QC-2
EPTC	5.02	0.020	0.10	ug/l	5.00	100	70-130			QC-2
Hexachlorocyclopentadiene	2.06	0.092	1.0	ug/l	2.50	82	33-106			QC-2
Metolachlor	4.64	0.030	0.10	ug/l	5.00	93	60-130			QC-2
Metribuzin	4.44	0.030	0.10	ug/l	5.00	89	50-120			QC-2
Molinate	4.95	0.030	0.10	ug/l	5.00	99	70-130			QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00	60	30-120			QC-2
Simazine	4.53	0.058	0.10	ug/l	5.00	91	60-130			QC-2
Terbacil	5.50	0.090	2.0	ug/l	5.00	110	70-130			QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00	99	70-130			QC-2
Trithion	4.63	0.054	0.10	ug/l	5.00	93	70-130			QC-2
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	4.96			ug/l	5.00	99	70-130			QC-2
Perylene-d12	4.41			ug/l	5.00	88	50-120			QC-2
Triphenyl phosphate	4.83			ug/l	5.00	97	70-130			QC-2
LCS Dup (W4B2424-BSD1)										
					Prepared: 02/29/24 Analyzed: 03/09/24					
Alachlor	10.3	0.063	0.10	ug/l	7.50	137	70-130	7	30	Q-08
Atrazine	4.62	0.042	0.10	ug/l	5.00	92	70-130	7	30	
Benzo (a) pyrene	4.17	0.045	0.10	ug/l	5.00	83	60-130	3	30	
Bis(2-ethylhexyl)adipate	7.82	0.38	5.0	ug/l	5.00	156	70-130	5	30	Q-08
Bis(2-ethylhexyl)phthalate	6.69	0.41	3.0	ug/l	5.00	134	70-130	12	30	Q-08

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)										
LCS Dup (W4B2424-BSD1)					Prepared: 02/29/24 Analyzed: 03/09/24					
Bromacil	6.32	0.24	0.50	ug/l	5.00	126	70-130	2	30	
Butachlor	5.69	0.040	0.10	ug/l	5.00	114	70-130	2	30	
Captan	6.03	0.32	1.0	ug/l	5.00	121	70-130	8	30	
Chlorpropham	5.50	0.040	0.10	ug/l	5.00	110	70-130	6	30	
Diazinon	3.48	0.022	0.10	ug/l	5.00	70	50-120	3	30	
Dimethoate	4.25	0.041	0.20	ug/l	5.00	85	50-120	11	30	
Diphenamid	5.82	0.030	0.10	ug/l	5.00	116	70-130	2	30	
Disulfoton	4.30	0.11	0.20	ug/l	5.00	86	50-120	8	30	
EPTC	4.82	0.020	0.10	ug/l	5.00	96	70-130	8	30	
Hexachlorocyclopentadiene	2.39	0.092	1.0	ug/l	2.50	96	33-106	8	30	
Metolachlor	6.82	0.030	0.10	ug/l	5.00	136	60-130	8	30	Q-08
Metribuzin	5.82	0.030	0.10	ug/l	5.00	116	50-120	7	30	
Molinate	4.08	0.030	0.10	ug/l	5.00	82	70-130	7	30	
Prometryn	2.94	0.030	0.10	ug/l	5.00	59	30-120	4	30	
Simazine	4.92	0.058	0.10	ug/l	5.00	98	60-130	5	30	
Terbacil	5.48	0.090	2.0	ug/l	5.00	110	70-130	7	30	
Thiobencarb	6.91	0.069	0.10	ug/l	5.00	138	70-130	3	30	Q-08
Trithion	6.93	0.054	0.10	ug/l	5.00	139	70-130	12	30	Q-08
<i>Surrogate(s)</i>										
1,3-Dimethyl-2-nitrobenzene	5.26			ug/l	5.00	105	70-130			
Perylene-d12	3.95			ug/l	5.00	79	50-120			
Triphenyl phosphate	4.36			ug/l	5.00	87	70-130			
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24					
Alachlor	7.05	0.063	0.10	ug/l	7.50	94	70-130	1	30	QC-2
Atrazine	4.88	0.042	0.10	ug/l	5.00	98	70-130	2	30	QC-2
Benzo (a) pyrene	4.12	0.045	0.10	ug/l	5.00	82	60-130	1	30	QC-2
Bis(2-ethylhexyl)adipate	5.68	0.38	5.0	ug/l	5.00	114	70-130	7	30	QC-2
Bis(2-ethylhexyl)phthalate	5.39	0.41	3.0	ug/l	5.00	108	70-130	8	30	QC-2
Bromacil	4.68	0.24	0.50	ug/l	5.00	94	70-130	2	30	QC-2
Butachlor	4.62	0.040	0.10	ug/l	5.00	92	70-130	6	30	QC-2
Captan	4.96	0.32	1.0	ug/l	5.00	99	70-130	4	30	QC-2
Chlorpropham	5.17	0.040	0.10	ug/l	5.00	103	70-130	10	30	QC-2
Diazinon	2.81	0.022	0.10	ug/l	5.00	56	50-120	7	30	QC-2
Dimethoate	3.81	0.041	0.20	ug/l	5.00	76	50-120	0.2	30	QC-2
Diphenamid	5.12	0.030	0.10	ug/l	5.00	102	70-130	3	30	QC-2
Disulfoton	4.28	0.11	0.20	ug/l	5.00	86	50-120	1	30	QC-2
EPTC	5.25	0.020	0.10	ug/l	5.00	105	70-130	5	30	QC-2
Hexachlorocyclopentadiene	2.16	0.092	1.0	ug/l	2.50	87	33-106	5	30	QC-2
Metolachlor	4.55	0.030	0.10	ug/l	5.00	91	60-130	2	30	QC-2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2424 - EPA 525.2 (Continued)											
LCS Dup (W4B2424-BSD2)					Prepared: 02/29/24 Analyzed: 03/23/24						
Metribuzin	4.48	0.030	0.10	ug/l	5.00		90	50-120	1	30	QC-2
Molinate	5.69	0.030	0.10	ug/l	5.00		114	70-130	14	30	QC-2
Prometryn	2.98	0.030	0.10	ug/l	5.00		60	30-120	0.1	30	QC-2
Simazine	4.22	0.058	0.10	ug/l	5.00		84	60-130	7	30	QC-2
Terbacil	5.64	0.090	2.0	ug/l	5.00		113	70-130	3	30	QC-2
Thiobencarb	4.95	0.069	0.10	ug/l	5.00		99	70-130	0.03	30	QC-2
Trithion	4.58	0.054	0.10	ug/l	5.00		92	70-130	1	30	QC-2
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	4.93			ug/l	5.00		99	70-130			QC-2
Perylene-d12	4.23			ug/l	5.00		85	50-120			QC-2
Triphenyl phosphate	4.92			ug/l	5.00		98	70-130			QC-2

Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0010 - EPA 1613B											
Blank (W4C0010-BLK1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	ND	2.48	5.00	pg/l							
LCS (W4C0010-BS1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	7.98	2.48	5.00	pg/l	10.0		80	73-146			
LCS Dup (W4C0010-BSD1)					Prepared: 03/01/24 Analyzed: 03/05/24						
2,3,7,8-TCDD (Dioxin)	9.48	2.48	5.00	pg/l	10.0		95	73-146	17	20	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:
05/01/2024 10:19

Project Manager: Brown & Caldwell

Quality Control Results

(Continued)

Volatile Organics by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2414 - EPA 524.3											
Blank (W4B2414-BLK1) Prepared & Analyzed: 02/29/24											
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l							
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l							
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.426			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.413			ug/l	0.400		103	70-130			
LCS (W4B2414-BS1) Prepared & Analyzed: 02/29/24											
1,2-Dibromo-3-chloropropane	0.0625	0.0042	0.010	ug/l	0.0500		125	70-130			
1,2-Dibromoethane (EDB)	0.0563	0.0029	0.020	ug/l	0.0500		113	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.419			ug/l	0.400		105	70-130			
4-Bromofluorobenzene	0.409			ug/l	0.400		102	70-130			
LCS Dup (W4B2414-BSD1) Prepared & Analyzed: 02/29/24											
1,2-Dibromo-3-chloropropane	0.0608	0.0042	0.010	ug/l	0.0500		122	70-130	3	30	
1,2-Dibromoethane (EDB)	0.0569	0.0029	0.020	ug/l	0.0500		114	70-130	1	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.422			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.414			ug/l	0.400		104	70-130			
Duplicate (W4B2414-DUP1) Source: 4B15126-01 Prepared & Analyzed: 02/29/24											
1,2-Dibromo-3-chloropropane	ND	0.0042	0.010	ug/l		ND				30	
1,2-Dibromoethane (EDB)	ND	0.0029	0.020	ug/l		ND				30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.425			ug/l	0.400		106	70-130			
4-Bromofluorobenzene	0.415			ug/l	0.400		104	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - DDW Standards

Reported:

05/01/2024 10:19

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria.
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
J	Estimated conc. detected <MRL and >MDL.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
Q-02	Low recovery of this analyte in the QC sample. The analysis of the low level standard produced acceptable recovery indicating that the sample result might be accurately reported as Not Detected.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
U	Result not detected above the detection limit
%REC	Percent Recovery
Dil	Dilution
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: **4B20133**

Date/Time Received: **02/18/24 @ 15:39**

WKO Logged by: **Lester Abad**

of Samples: **02**

Samples Checked by: **Lester Abad**

Delivered by: **Client**

Task	Yes	No	N/A	Comments
COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature		12.5°C		
Samples received on Ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)		Wet		
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (See comment)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea size?
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT				
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2; 6710B<2; 608.3 5-9				
Free Chlorine Tested <0.1 (Organic Analyses)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cl Test Strip Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				AmI added:

PM Comments

Sample Receipt Checklist Prepared by:

Signature: *Lester Abad*

Date: **02/20/24**



Chain of Custody

Project Number: 4B20133

Laboratory:

GEL Laboratories, LLC
 2040 Savage Rd.
 Charleston, SC 29407
 Phone: (843) 769-7390
 Fax: (843) 766-1178

Project: City of Santa Monica - 97-005 090123

Project Number: 4B20133

Weck Manager: Kim G. Tu

Sample Name

• Container(s)

4B20133-01/AT-RES-7-S22

Matrix

Water

Sampled

Date/Time (24H): 2/18/24 9:55

Analyses Requested

Radium-226 (EPA 903.1) - sub	Radium-228 (EPA 904.0) - sub	Strontium-90 (EPA 905.0) - sub	Tritium (EPA 906.0) - sub						
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						

Turn Around Time:

Normal

Drinking Water:

Yes / No

Need Transfer File (xls):

Yes / No

Tracking Number:

Comments

Remarks / Special Comments:

Relinquished By: *Arthur Uyung*

Date / Time: 2/22/24

Received By:

Date / Time:

Relinquished By:

Date / Time Received By:

Date / Time:

Weck Laboratories, Inc. - Chain of Custody - 4B20133

Sample Condition

Temperature:

Preserved: Yes / No

Evidence Seal Intact: Yes / No

Container Attacked: Yes / No

Preserved at Lab: Yes / No

Work Orders: 4B20134

Report Date: 3/12/2024

Received Date: 2/16/2024

Project: COSM 97-005 - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

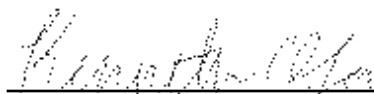
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/16/24 with the Chain-of-Custody document. The samples were received in good condition, at 13.3 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Project Manager: Brown & Caldwell

Certificate of Analysis

FINAL REPORT

Reported:
03/12/2024 08:30

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-5-S4	Brown & Caldwell	4B20134-01	Water	02/16/24 12:00	
AT-GS-5-S7	Brown & Caldwell	4B20134-02	Water	02/16/24 12:03	
AT-RES-5-S22	Brown & Caldwell	4B20134-03	Water	02/16/24 13:35	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
03/12/2024 08:30

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GS-5-S4

Sampled: 02/16/24 12:00 by Brown & Caldwell

4B20134-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0327	Preparation: _NONE (TOC/TOX)					
Total Organic Carbon (TOC)	0.54	0.30	mg/l	1	03/07/24	

Instr: TOC02

Prepared: 03/05/24 17:21

Analyst: rem

Sample Results

Sample: AT-GS-5-S7

Sampled: 02/16/24 12:03 by Brown & Caldwell

4B20134-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0327	Preparation: _NONE (TOC/TOX)					
Total Organic Carbon (TOC)	0.64	0.30	mg/l	1	03/07/24	

Instr: TOC02

Prepared: 03/05/24 17:21

Analyst: rem

Sample Results

Sample: AT-RES-5-S22

Sampled: 02/16/24 13:35 by Brown & Caldwell

4B20134-03 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: SM 5310B						
Batch ID: W4C0327	Preparation: _NONE (TOC/TOX)					
Total Organic Carbon (TOC)	ND	0.30	mg/l	1	03/07/24	

Instr: TOC02

Prepared: 03/05/24 17:21

Analyst: rem

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/12/2024 08:30

Project Manager: Brown & Caldwell

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4C0327 - SM 5310B										
Blank (W4C0327-BLK1)										
Total Organic Carbon (TOC)	ND	0.30	mg/l							
				Prepared: 03/05/24 Analyzed: 03/07/24						
LCS (W4C0327-BS1)										
Total Organic Carbon (TOC)	0.980	0.30	mg/l	1.00		98	85-115			
				Prepared: 03/05/24 Analyzed: 03/07/24						
Matrix Spike (W4C0327-MS1)										
Total Organic Carbon (TOC)	7.26	0.30	mg/l	5.00	2.84	88	76-115			
				Prepared: 03/05/24 Analyzed: 03/07/24						
Matrix Spike Dup (W4C0327-MSD1)										
Total Organic Carbon (TOC)	7.18	0.30	mg/l	5.00	2.84	87	76-115	1	20	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 - Background Water Quality

Reported:
 03/12/2024 08:30

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B21169

Report Date: 3/27/2024

Received Date: 2/21/2024

Project: City of Santa Monica - 97-005 Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

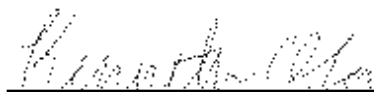
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/21/24 with the Chain-of-Custody document. The samples were received in good condition, at 7.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/27/2024 09:14

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-RES-4-S22	Helia Ng	4B21169-01	Water	02/19/24 12:50	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
EPA 521 in Water				
N-Nitrosodimethylamine	62-75-9	⊗	⊗	⊗
N-Nitrosomethylethylamine	10595-95-6	⊗	⊗	⊗
N-Nitrosodiethylamine	55-18-5	⊗	⊗	⊗
N-Nitrosodi-n-propylamine	621-64-7	⊗	⊗	⊗
N-Nitrosomorpholine	59-89-2	⊗	⊗	⊗
N-Nitrosopyrrolidine	930-55-2	⊗	⊗	⊗
N-Nitrosopiperidine	100-75-4	⊗	⊗	⊗
N-Nitrosodi-n-butylamine	924-16-3	⊗	⊗	⊗
NDMA-d6		⊗	⊗	⊗
EPA 8330A in Water				
HMX	2691-41-0	⊗		⊗
RDX	121-82-4	⊗		⊗
1,3,5-Trinitrobenzene	99-35-4			⊗
1,3-Dinitrobenzene	99-65-0			⊗
Nitrobenzene	98-95-3			⊗
Tetryl	479-45-8	⊗		⊗
2,4,6-Trinitrotoluene	118-96-7			⊗
4-Amino-2,6-Dinitrotoluene	19406-51-0	⊗	⊗	⊗
2-Amino-4,6-Dinitrotoluene	35572-78-2	⊗		⊗
2,6-Dinitrotoluene	606-20-2			⊗
2,4-Dinitrotoluene	121-14-2			⊗
2-Nitrotoluene	88-72-2			⊗
4-Nitrotoluene	99-99-0			⊗
3-Nitrotoluene	99-08-1			⊗

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/27/2024 09:14

Sample Results

Sample: AT-RES-4-S22

Sampled: 02/19/24 12:50 by Helia Ng

4B21169-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-------	-----	----------	-----------

Explosives by EPA Method 8330

Method: EPA 8330A

Instr: LC10

Batch ID: W4B1813

Preparation: Method (SPE)

Prepared: 02/23/24 08:46

Analyst: cam

1,3,5-Trinitrobenzene	ND	1.0	ug/l	1	03/13/24	
1,3-Dinitrobenzene	ND	1.0	ug/l	1	03/13/24	
2,4,6-Trinitrotoluene	ND	1.0	ug/l	1	03/13/24	
2,4-Dinitrotoluene	ND	1.0	ug/l	1	03/13/24	
2,6-Dinitrotoluene	ND	1.0	ug/l	1	03/13/24	
2-Amino-4,6-Dinitrotoluene	ND	1.0	ug/l	1	03/13/24	
2-Nitrotoluene	ND	1.0	ug/l	1	03/13/24	
3-Nitrotoluene	ND	1.0	ug/l	1	03/13/24	
4-Amino-2,6-Dinitrotoluene	ND	1.0	ug/l	1	03/13/24	
4-Nitrotoluene	ND	1.0	ug/l	1	03/13/24	
HMX	ND	1.0	ug/l	1	03/13/24	
Nitrobenzene	ND	1.0	ug/l	1	03/13/24	
RDX	ND	1.0	ug/l	1	03/13/24	
Tetryl	ND	1.0	ug/l	1	03/13/24	

Nitrosamines by CI GC/MS/MS, EPA 521

Method: EPA 521

Instr: GCMS09

Batch ID: W4B2292

Preparation: EPA 521/SPE

Prepared: 02/28/24 08:07

Analyst: mld

N-Nitrosodiethylamine	ND	2.0	ng/l	1	03/05/24	
N-Nitrosodimethylamine	ND	2.0	ng/l	1	03/05/24	
N-Nitrosodi-n-butylamine	ND	2.0	ng/l	1	03/05/24	
N-Nitrosodi-n-propylamine	ND	2.0	ng/l	1	03/05/24	
N-Nitrosomethylethylamine	ND	2.0	ng/l	1	03/05/24	
N-Nitrosomorpholine	ND	2.0	ng/l	1	03/05/24	
N-Nitrosopiperidine	ND	2.0	ng/l	1	03/05/24	
N-Nitrosopyrrolidine	ND	2.0	ng/l	1	03/05/24	

Surrogate(s)

NDMA-d6	94%	Conc: 23.5	70-130	03/05/24
---------	-----	------------	--------	----------

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 Background
Water Quality
Project Manager: Brown & Caldwell

Reported:
03/27/2024 09:14

Quality Control Results

Explosives by EPA Method 8330

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1813 - EPA 8330A									
Blank (W4B1813-BLK1)					Prepared: 02/22/24 Analyzed: 03/13/24				
1,3,5-Trinitrobenzene	ND	1.0	ug/l						
1,3-Dinitrobenzene	ND	1.0	ug/l						
2,4,6-Trinitrotoluene	ND	1.0	ug/l						
2,4-Dinitrotoluene	ND	1.0	ug/l						
2,6-Dinitrotoluene	ND	1.0	ug/l						
2-Amino-4,6-Dinitrotoluene	ND	1.0	ug/l						
2-Nitrotoluene	ND	1.0	ug/l						
3-Nitrotoluene	ND	1.0	ug/l						
4-Amino-2,6-Dinitrotoluene	ND	1.0	ug/l						
4-Nitrotoluene	ND	1.0	ug/l						
HMX	ND	1.0	ug/l						
Nitrobenzene	ND	1.0	ug/l						
RDX	ND	1.0	ug/l						
Tetryl	ND	1.0	ug/l						
LCS (W4B1813-BS1)					Prepared: 02/22/24 Analyzed: 03/13/24				
1,3,5-Trinitrobenzene	2.83	1.0	ug/l	2.50	113	70-130			
1,3-Dinitrobenzene	2.69	1.0	ug/l	2.50	107	70-130			
2,4,6-Trinitrotoluene	2.93	1.0	ug/l	2.50	117	70-130			
2,4-Dinitrotoluene	2.56	1.0	ug/l	2.50	102	70-130			
2,6-Dinitrotoluene	2.52	1.0	ug/l	2.50	101	70-130			
2-Amino-4,6-Dinitrotoluene	2.62	1.0	ug/l	2.50	105	70-130			
2-Nitrotoluene	2.08	1.0	ug/l	2.50	83	70-130			
3-Nitrotoluene	2.04	1.0	ug/l	2.50	82	70-130			
4-Amino-2,6-Dinitrotoluene	2.83	1.0	ug/l	2.50	113	70-130			
4-Nitrotoluene	2.13	1.0	ug/l	2.50	85	70-130			
HMX	2.81	1.0	ug/l	2.50	112	70-130			
Nitrobenzene	2.28	1.0	ug/l	2.50	91	70-130			
RDX	2.86	1.0	ug/l	2.50	114	70-130			
Tetryl	2.50	1.0	ug/l	2.50	100	70-130			
LCS Dup (W4B1813-BSD1)					Prepared: 02/22/24 Analyzed: 03/13/24				
1,3,5-Trinitrobenzene	2.58	1.0	ug/l	2.50	103	70-130	9	25	
1,3-Dinitrobenzene	2.44	1.0	ug/l	2.50	98	70-130	10	25	
2,4,6-Trinitrotoluene	2.65	1.0	ug/l	2.50	106	70-130	10	25	
2,4-Dinitrotoluene	2.35	1.0	ug/l	2.50	94	70-130	9	25	
2,6-Dinitrotoluene	2.18	1.0	ug/l	2.50	87	70-130	14	25	
2-Amino-4,6-Dinitrotoluene	2.36	1.0	ug/l	2.50	94	70-130	11	25	
2-Nitrotoluene	1.88	1.0	ug/l	2.50	75	70-130	10	25	
3-Nitrotoluene	2.03	1.0	ug/l	2.50	81	70-130	0.4	25	
4-Amino-2,6-Dinitrotoluene	2.37	1.0	ug/l	2.50	95	70-130	18	25	



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/27/2024 09:14

Quality Control Results (Continued)

Explosives by EPA Method 8330 (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
Batch: W4B1813 - EPA 8330A (Continued)										
LCS Dup (W4B1813-BSD1)										
Prepared: 02/22/24 Analyzed: 03/13/24										
4-Nitrotoluene	1.80	1.0	ug/l	2.50		72	70-130	17	25	
HMX	2.48	1.0	ug/l	2.50		99	70-130	12	25	
Nitrobenzene	1.87	1.0	ug/l	2.50		75	70-130	19	25	
RDX	2.48	1.0	ug/l	2.50		99	70-130	14	25	
Tetryl	2.51	1.0	ug/l	2.50		100	70-130	0.4	25	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/27/2024 09:14

Quality Control Results (Continued)

Nitrosamines by CI GC/MS/MS, EPA 521

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2292 - EPA 521										
Blank (W4B2292-BLK1) Prepared: 02/28/24 Analyzed: 03/04/24										
N-Nitrosodiethylamine	ND	2.0	ng/l							
N-Nitrosodimethylamine	ND	2.0	ng/l							
N-Nitrosodi-n-butylamine	ND	2.0	ng/l							
N-Nitrosodi-n-propylamine	ND	2.0	ng/l							
N-Nitrosomethylethylamine	ND	2.0	ng/l							
N-Nitrosomorpholine	ND	2.0	ng/l							
N-Nitrosopiperidine	ND	2.0	ng/l							
N-Nitrosopyrrolidine	ND	2.0	ng/l							
<i>Surrogate(s)</i>										
NDMA-d6	22.7		ng/l	25.0		91	70-130			
LCS (W4B2292-BS1) Prepared: 02/28/24 Analyzed: 03/05/24										
N-Nitrosodiethylamine	1.66	2.0	ng/l	2.00		83	50-150			
N-Nitrosodimethylamine	2.26	2.0	ng/l	2.00		113	50-150			
N-Nitrosodi-n-butylamine	1.44	2.0	ng/l	2.00		72	50-150			
N-Nitrosodi-n-propylamine	1.61	2.0	ng/l	2.00		80	50-150			
N-Nitrosomethylethylamine	1.89	2.0	ng/l	2.00		95	50-150			
N-Nitrosomorpholine	1.94	2.0	ng/l	2.00		97	50-150			
N-Nitrosopiperidine	1.83	2.0	ng/l	2.00		91	50-150			
N-Nitrosopyrrolidine	1.81	2.0	ng/l	2.00		90	50-150			
<i>Surrogate(s)</i>										
NDMA-d6	24.6		ng/l	25.0		99	70-130			
Matrix Spike (W4B2292-MS1) Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24										
N-Nitrosodiethylamine	1.85	2.0	ng/l	2.05	ND	90	50-150			
N-Nitrosodimethylamine	2.08	2.0	ng/l	2.05	ND	101	50-150			
N-Nitrosodi-n-butylamine	1.54	2.0	ng/l	2.05	ND	75	50-150			
N-Nitrosodi-n-propylamine	1.55	2.0	ng/l	2.05	ND	75	50-150			
N-Nitrosomethylethylamine	2.03	2.0	ng/l	2.05	ND	99	50-150			
N-Nitrosomorpholine	1.87	2.0	ng/l	2.05	ND	91	50-150			
N-Nitrosopiperidine	2.00	2.0	ng/l	2.05	ND	98	50-150			
N-Nitrosopyrrolidine	1.96	2.0	ng/l	2.05	ND	96	50-150			
<i>Surrogate(s)</i>										
NDMA-d6	25.7		ng/l	25.7		100	70-130			
Matrix Spike Dup (W4B2292-MSD1) Source: 4B21086-01 Prepared: 02/28/24 Analyzed: 03/05/24										
N-Nitrosodiethylamine	2.01	2.0	ng/l	2.05	ND	98	50-150	8	50	
N-Nitrosodimethylamine	2.03	2.0	ng/l	2.05	ND	99	50-150	2	50	
N-Nitrosodi-n-butylamine	1.73	2.0	ng/l	2.05	ND	84	50-150	12	50	
N-Nitrosodi-n-propylamine	1.93	2.0	ng/l	2.05	ND	94	50-150	22	50	
N-Nitrosomethylethylamine	2.16	2.0	ng/l	2.05	ND	105	50-150	6	50	
N-Nitrosomorpholine	1.98	2.0	ng/l	2.05	ND	96	50-150	5	50	
N-Nitrosopiperidine	2.10	2.0	ng/l	2.05	ND	102	50-150	5	50	



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/27/2024 09:14

Quality Control Results (Continued)

Nitrosamines by CI GC/MS/MS, EPA 521 (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2292 - EPA 521 (Continued)										
Matrix Spike Dup (W4B2292-MSD1)										
N-Nitrosopyrrolidine	1.95	2.0	ng/l	2.05	ND	95	50-150	0.6	50	
<i>Surrogate(s)</i>										
NDMA-d6	25.5		ng/l	25.6		99	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - 97-005 Background
 Water Quality
Project Manager: Brown & Caldwell

Reported:
 03/27/2024 09:14

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B26122

Project: COSM 97-005 Background Water Quality

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Report Date: 3/07/2024

Received Date: 2/26/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/26/24 with the Chain-of-Custody document. The samples were received not in good condition, at 5.4 °C. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Michelle C. Matsumoto For Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 Background Water Quality

Reported:
03/07/2024 16:41

Project Manager: Brown & Caldwell

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GAC-8_811	Allison Wilcox	4B26122-01	Water	02/26/24 13:30	
AT-RO-8-514	Allison Wilcox	4B26122-02	Water	02/26/24 13:30	
AT-RO-8-524	Allison Wilcox	4B26122-03	Water	02/26/24 13:30	
AT-RES-8-522	Allison Wilcox	4B26122-04	Water	02/26/24 13:30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 Background Water Quality

Reported:
03/07/2024 16:41

Project Manager: Brown & Caldwell

Sample Results

Sample: AT-GAC-8_811

Sampled: 02/26/24 13:30 by Allison Wilcox

4B26122-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: EPA 353.2							
Batch ID: W4B2254	Preparation: _NONE (WETCHEM)						
Nitrate as N	6.5	0.040	0.20	mg/l	1	02/27/24 19:27	
							Instr: AA01
							Prepared: 02/27/24 15:31
							Analyst: ism

Metals by EPA 200 Series Methods

Method: EPA 200.8							
Batch ID: W4B2473	Preparation: EPA 200.2						
Uranium, Total	12	0.02	0.20	ug/l	1	03/01/24	
							Instr: ICPMS06
							Prepared: 02/29/24 13:43
							Analyst: tyc

Sample Results

Sample: AT-RO-8-514

Sampled: 02/26/24 13:30 by Allison Wilcox

4B26122-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.8							
Batch ID: W4B2473	Preparation: EPA 200.2						
Uranium, Total	11	0.02	0.20	ug/l	1	03/01/24	
							Instr: ICPMS06
							Prepared: 02/29/24 13:43
							Analyst: tyc

Sample Results

Sample: AT-RO-8-524

Sampled: 02/26/24 13:30 by Allison Wilcox

4B26122-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.8							
Batch ID: W4B2473	Preparation: EPA 200.2						
Uranium, Total	0.03	0.02	0.20	ug/l	1	03/01/24	J
							Instr: ICPMS06
							Prepared: 02/29/24 13:43
							Analyst: tyc

Sample Results

Sample: AT-RES-8-522

Sampled: 02/26/24 13:30 by Allison Wilcox

4B26122-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods							
Method: EPA 200.8							
Batch ID: W4B2473	Preparation: EPA 200.2						
Uranium, Total	3.0	0.02	0.20	ug/l	1	03/01/24	
							Instr: ICPMS06
							Prepared: 02/29/24 13:43
							Analyst: tyc

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005 Background Water Quality

Reported:
03/07/2024 16:41

Project Manager: Brown & Caldwell

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2254 - EPA 353.2											
Blank (W4B2254-BLK1)											
Nitrate as N	ND	0.040	0.20	mg/l	Prepared & Analyzed: 02/27/24						
LCS (W4B2254-BS1)											
Nitrate as N	1.02	0.040	0.20	mg/l	1.00		102	90-110			
Matrix Spike (W4B2254-MS1)											
Nitrate as N	8.67	0.040	0.20	mg/l	2.00	6.63	102	90-110			
Matrix Spike (W4B2254-MS2)											
Nitrate as N	5.86	0.040	0.20	mg/l	2.00	3.77	104	90-110			
Matrix Spike Dup (W4B2254-MSD1)											
Nitrate as N	8.65	0.040	0.20	mg/l	2.00	6.63	101	90-110	0.2	20	
Matrix Spike Dup (W4B2254-MSD2)											
Nitrate as N	5.87	0.040	0.20	mg/l	2.00	3.77	105	90-110	0.2	20	

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B2473 - EPA 200.8											
Blank (W4B2473-BLK1)											
Uranium, Total	ND	0.02	0.20	ug/l	Prepared: 02/29/24 Analyzed: 03/01/24						
LCS (W4B2473-BS1)											
Uranium, Total	49.7	0.02	0.20	ug/l	50.0		99	85-115			
Matrix Spike (W4B2473-MS1)											
Uranium, Total	50.6	0.02	0.20	ug/l	50.0	0.0312	101	70-130			
Matrix Spike Dup (W4B2473-MSD1)											
Uranium, Total	49.8	0.02	0.20	ug/l	50.0	0.0312	99	70-130	2	30	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005 Background Water Quality

Reported:
 03/07/2024 16:41

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Sample Receipt Checklist

Weck WKO: **4B26122**
 WKO Logged by: Jerald Ancheta
 Samples Checked by: Jerald Ancheta

Date/Time Received: 2/26/24 @ 17:25
 # of Samples: 04
 Delivered by: Client

Task	Yes	No	N/A	Comments
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>		5.4°C
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Ice Type (Blue/Wet)				Wet
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about receipt info?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VOC Headspace: (No) none, If Yes (see comment) 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <6mm/Pea Size?
pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2, 6710B<2, 608.3 5-9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot# Ant added:
Free Chlorine Tested <0.1 (Organics Analyses)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cl Test Strip Lot#
O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pH paper Lot#
pH adjusted for O&G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading: Acid Lot#
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ant added:

PM Comments

Sample Receipt Checklist Completed by: _____
 Signature: Jerald Ancheta Date: 2/26/24

Work Orders: 4D11096

Report Date: 4/30/2024

Project: COSM 97-005

Received Date: 4/11/2024

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

P.O. #:

Billing Code:

Attn: Brown & Caldwell

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

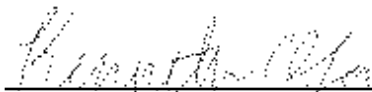
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 4/11/24 with the Chain-of-Custody document. The samples were received in good condition, at 4.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kenneth C. Oda For Kim G. Tu
Project Manager





WECK LABORATORIES, INC.

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Project Manager: Brown & Caldwell

Certificate of Analysis

FINAL REPORT

Reported:

04/30/2024 08:20

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
GAC-1A-LEAD-EFF	Earl Garcia	4D11096-01	Water	04/10/24 13:45	
GAC-1B-LAG-EFF	Earl Garcia	4D11096-02	Water	04/10/24 13:45	
GAC-2A-LEAD-EFF	Earl Garcia	4D11096-03	Water	04/10/24 13:45	
GAC-2B-LAG-EFF	Earl Garcia	4D11096-04	Water	04/10/24 13:45	
GAC-3A-LEAD-EFF	Earl Garcia	4D11096-05	Water	04/10/24 13:45	
GAC-3B-LAG-EFF	Earl Garcia	4D11096-06	Water	04/10/24 13:45	
GAC-4A-LEAD-EFF	Earl Garcia	4D11096-07	Water	04/10/24 13:45	
GAC-4B-LAG-EFF	Earl Garcia	4D11096-08	Water	04/10/24 13:45	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

04/30/2024 08:20

Project Manager: Brown & Caldwell

Sample Results

Sample: GAC-1A-LEAD-EFF

Sampled: 04/10/24 13:45 by Earl Garcia

4D11096-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W4D1113		Preparation: EPA 522/SPE		Prepared: 04/12/24 07:39		Analyst: mld	
1,4-Dioxane	ND	0.028	0.070	ug/l	1	04/16/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	75%	Conc: 7.40	70-130			04/16/24	

Sample Results

Sample: GAC-1B-LAG-EFF

Sampled: 04/10/24 13:45 by Earl Garcia

4D11096-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W4D1113		Preparation: EPA 522/SPE		Prepared: 04/12/24 07:39		Analyst: mld	
1,4-Dioxane	9.3	0.028	0.070	ug/l	1	04/16/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	81%	Conc: 8.38	70-130			04/16/24	

Sample Results

Sample: GAC-2A-LEAD-EFF

Sampled: 04/10/24 13:45 by Earl Garcia

4D11096-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W4D1113		Preparation: EPA 522/SPE		Prepared: 04/12/24 07:39		Analyst: mld	
1,4-Dioxane	0.43	0.028	0.070	ug/l	1	04/16/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	79%	Conc: 7.99	70-130			04/16/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

04/30/2024 08:20

Project Manager: Brown & Caldwell

Sample Results

(Continued)

Sample: GAC-2B-LAG-EFF

Sampled: 04/10/24 13:45 by Earl Garcia

4D11096-04 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W4D1113		Preparation: EPA 522/SPE		Prepared: 04/12/24 07:39		Analyst: mld	
1,4-Dioxane	3.9	0.028	0.070	ug/l	1	04/16/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	77%	Conc: 7.69	70-130			04/16/24	

Sample Results

(Continued)

Sample: GAC-3A-LEAD-EFF

Sampled: 04/10/24 13:45 by Earl Garcia

4D11096-05 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W4D1113		Preparation: EPA 522/SPE		Prepared: 04/12/24 07:39		Analyst: mld	
1,4-Dioxane	ND	0.028	0.070	ug/l	1	04/16/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	81%	Conc: 8.86	70-130			04/16/24	

Sample Results

(Continued)

Sample: GAC-3B-LAG-EFF

Sampled: 04/10/24 13:45 by Earl Garcia

4D11096-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522			Instr: GCMS20				
Batch ID: W4D1113		Preparation: EPA 522/SPE		Prepared: 04/12/24 07:39		Analyst: mld	
1,4-Dioxane	0.38	0.028	0.070	ug/l	1	04/16/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	72%	Conc: 7.42	70-130			04/16/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005
Project Manager: Brown & Caldwell

Reported:
04/30/2024 08:20

Sample Results

(Continued)

Sample: GAC-4A-LEAD-EFF

Sampled: 04/10/24 13:45 by Earl Garcia

4D11096-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4D1113		Preparation: EPA 522/SPE		Prepared: 04/12/24 07:39		Analyst: mld	
1,4-Dioxane	ND	0.028	0.070	ug/l	1	04/16/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	79%	Conc: 7.92	70-130			04/16/24	

Sample Results

(Continued)

Sample: GAC-4B-LAG-EFF

Sampled: 04/10/24 13:45 by Earl Garcia

4D11096-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
1,4-Dioxane by SPE/GCMS SIM, EPA Method 522							
Method: EPA 522				Instr: GCMS20			
Batch ID: W4D1113		Preparation: EPA 522/SPE		Prepared: 04/12/24 07:39		Analyst: mld	
1,4-Dioxane	ND	0.028	0.070	ug/l	1	04/16/24	
<i>Surrogate(s)</i>							
1,4-Dioxane-d8	81%	Conc: 8.12	70-130			04/16/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:

04/30/2024 08:20

Project Manager: Brown & Caldwell

Quality Control Results

1,4-Dioxane by SPE/GCMS SIM, EPA Method 522

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4D1113 - EPA 522											
Blank (W4D1113-BLK1)											
1,4-Dioxane	ND	0.028	0.070	ug/l							
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	9.31			ug/l	10.0		93	70-130			
LCS (W4D1113-BS1)											
1,4-Dioxane	0.302	0.028	0.070	ug/l	0.400		75	70-130			
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.43			ug/l	10.0		74	70-130			
LCS Dup (W4D1113-BSD1)											
1,4-Dioxane	0.324	0.028	0.070	ug/l	0.400		81	70-130	7	30	
<i>Surrogate(s)</i>											
1,4-Dioxane-d8	7.54			ug/l	10.0		75	70-130			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: COSM 97-005

Reported:
04/30/2024 08:20

Project Manager: Brown & Caldwell

Notes and Definitions

Item	Definition
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Work Orders: 4B16032

Report Date: 5/13/2024

Received Date: 02/15/2024

Project: City of Santa Monica - Background Water Quality

Turnaround Time: Normal

Phones: (213) 271-2300

Fax: (213) 271-2320

Attn: Brown & Caldwell

P.O. #:

Client: Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Billing Code:

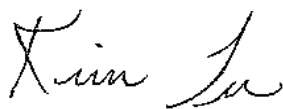
DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Brown & Caldwell,

Enclosed are the results of analyses for samples received 2/15/24 with the Chain-of-Custody document. The samples were received in good condition, at 2.2 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Kim G. Tu
Project Manager



Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Case Narrative

This is a Supplement to the Certificate of Analysis previously issued 4/4/2024 for the above referenced Project to report additional metals requested by Steven Shiokari.

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
AT-GS-4-54	Earl Garcia	4B16032-01	Water	02/15/24 09:25	
AT-GS-4-57	Earl Garcia	4B16032-02	Water	02/15/24 11:00	
AT-RES-4-522	Earl Garcia	4B16032-03	Water	02/15/24 11:45	
AT-RES-3-522	Earl Garcia	4B16032-06	Water	02/15/24 15:20	
AT-GS-3-57	Earl Garcia	4B16032-07	Water	02/15/24 14:35	
AT-GS-3-57	Earl Garcia	4B16032-08	Water	02/15/24 14:50	

Analyses Accreditation Summary

[TOC_1]Not Certified Analyses Summary[TOC]

Analyte	CAS #	Not By ELAP-CA	Not By NELAP	Not ANAB ISO 17025
AWWA in Water				
Aggressive Index		⊗	⊗	⊗
EPA 140.1 in Water				
Threshold Odor Number			⊗	⊗
EPA 200.7 in Water				
Silica as SiO ₂ , Total	7631-86-9			⊗
EPA 200.8 in Water				
Potassium, Total	7440-09-7			⊗
Strontium, Total	7440-24-6			⊗
Uranium, Total	7440-61-1			⊗
EPA 365.3 in Water				
Phosphorus as PO ₄ , Total	14265-44-2		⊗	⊗
SM 2330B in Water				
Langelier Index @ 60 C		⊗	⊗	⊗
Langelier Index @ Source Temp		⊗	⊗	⊗
Langelier Index @ 20 C		⊗	⊗	⊗
SM 9215E in Water				
Heterotrophic Plate Count			⊗	
SM 9221B in Water				
Total Coliform			⊗	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16032-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	120	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.26	0.0090	0.10	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/14/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1365	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 18:44		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/15/24 19:33	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	0.49	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	ND	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	5.4	0.040	0.20	mg/l	1	02/16/24 17:50	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 17:50	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.27	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	330	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	400	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.131	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	0.642	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16032-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)						Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)						Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	25.6	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)						Analyst: bel
Total Dissolved Solids	900	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)						Analyst: mes
pH	7.07	0.10	0.10	pH Units	1	02/16/24 17:39	*

Metals by EPA 200 Series Methods

Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]						Analyst: kvm
Hardness as CaCO3, Total	528	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7							
Batch ID: W4B1958	Preparation: EPA 200.2						Analyst: kvm
Boron, Total	140	1.3	10	ug/l	1	02/26/24	
Calcium, Total	120	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	55.5	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	40	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	40	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8							
Batch ID: W4B1962	Preparation: EPA 200.2						Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.69	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	56	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	12	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	14	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	2.5	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	3.9	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	110	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	570	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16032-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B2336		Preparation: EPA 200.2		Prepared: 02/29/24 11:14		Analyst: tyc	
Iron, Total	21	3.9	20	ug/l	1	03/01/24	

Microbiological Parameters by Standard Methods

Method: SM 9215E			Instr: INC06				
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	O-09
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Sample Results

(Continued)

Sample: AT-GS-4-54

Sampled: 02/15/24 9:25 by Earl Garcia

4B16032-01RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477		Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM	
Sulfate as SO4	230	0.72	1.5	mg/l	3	02/19/24	M-06

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16032-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	140	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.30	0.0090	0.10	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	12.7			AGI	1	03/14/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1365	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 18:44		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/15/24 19:33	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	0.49	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.42	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	0.85	0.040	0.20	mg/l	1	02/16/24 17:52	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 17:52	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.22	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	350	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	430	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.775	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	1.28	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16032-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)			Instr: [CALC]		Prepared: 03/12/24 16:29	Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)			Instr: [CALC]		Prepared: 03/14/24 11:12	Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	80.2	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)			Instr: OVEN17		Prepared: 02/20/24 12:32	Analyst: bel
Total Dissolved Solids	1100	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)			Instr: AA02		Prepared: 02/16/24 16:41	Analyst: mes
pH	7.59	0.10	0.10	pH Units	1	02/16/24 17:42	*

Metals by EPA 200 Series Methods

Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]			Instr: [CALC]		Prepared: 02/23/24 09:40	Analyst: kvm
Hardness as CaCO3, Total	672	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7							
Batch ID: W4B1958	Preparation: EPA 200.2			Instr: ICP03		Prepared: 02/23/24 09:40	Analyst: kvm
Boron, Total	230	1.3	10	ug/l	1	02/26/24	
Calcium, Total	160	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	65.9	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	43	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	43	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8							
Batch ID: W4B1962	Preparation: EPA 200.2			Instr: ICPMS06		Prepared: 02/23/24 13:18	Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.86	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	57	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	2.2	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	3.2	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	2.1	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	100	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	870	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16032-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2336		Preparation: EPA 200.2		Prepared: 02/29/24 11:14		Analyst: tyc	
Iron, Total	6.8	3.9	20	ug/l	1	03/01/24	J

Microbiological Parameters by Standard Methods

Method: SM 9215E				Instr: INC06			
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	O-15
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Sample Results

(Continued)

Sample: AT-GS-4-57

Sampled: 02/15/24 11:00 by Earl Garcia

4B16032-02RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477		Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM	
Sulfate as SO4	330	0.96	2.0	mg/l	4	02/19/24	M-06

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:45 by Earl Garcia

4B16032-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	24	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.75	0.0090	0.10	mg/l	1	02/18/24	
Sulfate as SO4	46	0.24	0.50	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	11.4			AGI	1	03/14/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1365	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 18:44		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/15/24 19:33	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	0.78	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.69	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	0.34	0.040	0.20	mg/l	1	02/16/24 17:53	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 17:53	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO4, Total	0.040	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO3	63	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO3	77	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	-0.403	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:45 by Earl Garcia

4B16032-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 60 C	0.120	-20.0	-10.0	LSI	1	03/13/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)		Prepared: 03/14/24 11:12		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	-2.63	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 12:32		Analyst: bel		
Total Dissolved Solids	150	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 16:41		Analyst: mes		
pH	7.86	0.10	0.10	pH Units	1	02/16/24 17:44	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/23/24 09:40		Analyst: kvm		
Hardness as CaCO3, Total	84.3	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B1958	Preparation: EPA 200.2		Prepared: 02/23/24 09:40		Analyst: kvm		
Boron, Total	130	1.3	10	ug/l	1	02/26/24	
Calcium, Total	20.2	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	8.23	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	6.2	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	6.2	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1962	Preparation: EPA 200.2		Prepared: 02/23/24 13:18		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Antimony, Total	ND	0.089	0.50	ug/l	1	02/26/24	
Arsenic, Total	0.21	0.074	0.40	ug/l	1	02/26/24	J
Barium, Total	7.2	0.14	1.0	ug/l	1	02/26/24	
Beryllium, Total	ND	0.029	0.10	ug/l	1	02/26/24	
Cadmium, Total	ND	0.042	0.20	ug/l	1	02/26/24	
Chromium, Total	0.20	0.089	0.20	ug/l	1	02/26/24	J
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-RES-4-522

Sampled: 02/15/24 11:45 by Earl Garcia

4B16032-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8			Instr: ICPMS06				
Batch ID: W4B1962		Preparation: EPA 200.2		Prepared: 02/23/24 13:18		Analyst: tyc	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Nickel, Total	ND	0.40	2.0	ug/l	1	02/26/24	
Potassium, Total	0.57	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	0.31	0.067	0.40	ug/l	1	02/26/24	J
Silver, Total	ND	0.027	0.20	ug/l	1	02/26/24	
Sodium, Total	26	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	97	0.036	0.20	ug/l	1	02/26/24	
Thallium, Total	ND	0.021	0.20	ug/l	1	02/26/24	
Uranium, Total	1.8	0.02	0.20	ug/l	1	02/26/24	
Vanadium, Total	0.30	0.16	0.50	ug/l	1	02/26/24	J
Zinc, Total	ND	1.7	10	ug/l	1	02/26/24	

Microbiological Parameters by Standard Methods

Method: SM 9215E			Instr: INC06				
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	
Method: SM 9221B			Instr: INC12				
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:20 by Earl Garcia

4B16032-06 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0			Instr: LC12				
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	30	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.75	0.0090	0.10	mg/l	1	02/18/24	
Sulfate as SO4	62	0.24	0.50	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA			Instr: [CALC]				
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	12.1			AGI	1	03/14/24	
Method: EPA 140.1			Instr: _ANALYST				
Batch ID: W4B1365	Preparation: _NONE (WETCHEM)		Prepared: 02/15/24 18:44		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/15/24 19:33	J
Method: EPA 350.1			Instr: AA06				
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	1.1	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2			Instr: AA06				
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	1.0	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2			Instr: AA01				
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	0.46	0.040	0.20	mg/l	1	02/16/24 17:54	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 17:54	
Method: EPA 365.3			Instr: UVVIS05				
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO4, Total	0.051	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B			Instr: _ANALYST				
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B			Instr: AA02				
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO3	84	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO3	100	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B			Instr: [CALC]				
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.272	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:20 by Earl Garcia

4B16032-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)							
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 60 C	0.789	-20.0	-10.0	LSI	1	03/13/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C1164	Preparation: _NONE (METALS)		Prepared: 03/14/24 11:12		Analyst: aln		
CCPP, Calcium Carbonate Precip. Pot.	2.41	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C				Instr: OVEN17			
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 12:32		Analyst: bel		
Total Dissolved Solids	190	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B				Instr: AA02			
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 16:41		Analyst: mes		
pH	8.29	0.10	0.10	pH Units	1	02/16/24 17:47	*
Metals by EPA 200 Series Methods							
Method: [CALC]				Instr: [CALC]			
Batch ID: [CALC]	Preparation: [CALC]		Prepared: 02/23/24 09:40		Analyst: kvm		
Hardness as CaCO3, Total	116	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7				Instr: ICP03			
Batch ID: W4B1958	Preparation: EPA 200.2		Prepared: 02/23/24 09:40		Analyst: kvm		
Boron, Total	120	1.3	10	ug/l	1	02/26/24	
Calcium, Total	27.7	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	11.4	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	8.4	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	8.5	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1962	Preparation: EPA 200.2		Prepared: 02/23/24 13:18		Analyst: tyc		
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Antimony, Total	ND	0.089	0.50	ug/l	1	02/26/24	
Arsenic, Total	0.25	0.074	0.40	ug/l	1	02/26/24	J
Barium, Total	10	0.14	1.0	ug/l	1	02/26/24	
Beryllium, Total	ND	0.029	0.10	ug/l	1	02/26/24	
Cadmium, Total	ND	0.042	0.20	ug/l	1	02/26/24	
Chromium, Total	0.11	0.089	0.20	ug/l	1	02/26/24	J
Copper, Total	ND	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Iron, Total	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-RES-3-522

Sampled: 02/15/24 15:20 by Earl Garcia

4B16032-06 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B1962		Preparation: EPA 200.2		Prepared: 02/23/24 13:18		Analyst: tyc	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Nickel, Total	ND	0.40	2.0	ug/l	1	02/26/24	
Potassium, Total	0.73	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	0.40	0.067	0.40	ug/l	1	02/26/24	
Silver, Total	ND	0.027	0.20	ug/l	1	02/26/24	
Sodium, Total	31	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	130	0.036	0.20	ug/l	1	02/26/24	
Thallium, Total	ND	0.021	0.20	ug/l	1	02/26/24	
Uranium, Total	2.4	0.02	0.20	ug/l	1	02/26/24	
Vanadium, Total	0.36	0.16	0.50	ug/l	1	02/26/24	J
Zinc, Total	ND	1.7	10	ug/l	1	02/26/24	

Microbiological Parameters by Standard Methods

Method: SM 9215E				Instr: INC06			
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16032-07 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477	Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM		
Chloride, Total	140	0.19	0.50	mg/l	1	02/18/24	
Fluoride, Total	0.30	0.0090	0.10	mg/l	1	02/18/24	
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: AWWA				Instr: [CALC]			
Batch ID: W4C1045	Preparation: _NONE (METALS)		Prepared: 03/13/24 12:42		Analyst: aln		
Aggressive Index	12.7			AGI	1	03/14/24	
Method: EPA 140.1				Instr: _ANALYST			
Batch ID: W4B1429	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:21		Analyst: rob		
Threshold Odor Number	1.0		1.0	T.O.N.	1	02/16/24 13:44	J
Method: EPA 350.1				Instr: AA06			
Batch ID: W4C0794	Preparation: _NONE (WETCHEM)		Prepared: 03/11/24 10:50		Analyst: YMT		
Ammonia as N	0.38	0.017	0.10	mg/l	1	03/12/24	
Method: EPA 351.2				Instr: AA06			
Batch ID: W4C0696	Preparation: _NONE (WETCHEM)		Prepared: 03/08/24 11:56		Analyst: YMT		
TKN	0.35	0.065	0.10	mg/l	1	03/11/24	
Method: EPA 353.2				Instr: AA01			
Batch ID: W4B1446	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 15:37		Analyst: ISM		
Nitrate as N	0.67	0.040	0.20	mg/l	1	02/16/24 18:00	
Nitrite as N	ND	42	100	ug/l	1	02/16/24 18:00	
Method: EPA 365.3				Instr: UVVIS05			
Batch ID: W4C0522	Preparation: _NONE (WETCHEM)		Prepared: 03/07/24 09:50		Analyst: rob		
Phosphorus as PO ₄ , Total	0.20	0.021	0.030	mg/l	1	03/11/24	
Method: SM 2120B				Instr: _ANALYST			
Batch ID: W4B1421	Preparation: _NONE (WETCHEM)		Prepared: 02/16/24 13:11		Analyst: kac		
Color	ND		3.0	Color Units	1	02/16/24 14:10	
Method: SM 2320B				Instr: AA02			
Batch ID: W4B1508	Preparation: _NONE (WETCHEM)		Prepared: 02/20/24 10:05		Analyst: mes		
Alkalinity as CaCO ₃	340	7.2	20	mg/l	1	02/20/24	
Bicarbonate Alkalinity as HCO ₃	420	8.8	24	mg/l	1	02/20/24	
Carbonate Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Hydroxide Alkalinity as CaCO ₃	ND	7.2	20	mg/l	1	02/20/24	
Method: SM 2330B				Instr: [CALC]			
Batch ID: W4C0959	Preparation: _NONE (METALS)		Prepared: 03/12/24 16:29		Analyst: aln		
Langelier Index @ 20 C	0.704	-20.0	-10.0	LSI	1	03/13/24	
Langelier Index @ 60 C	1.21	-20.0	-10.0	LSI	1	03/13/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16032-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
---------	--------	-----	-----	-------	-----	----------	-----------

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Method: SM 2330B							
Batch ID: W4C0959	Preparation: _NONE (METALS)			Instr: [CALC]		Prepared: 03/12/24 16:29	Analyst: aln
Method: SM 2330B							
Batch ID: W4C1164	Preparation: _NONE (METALS)			Instr: [CALC]		Prepared: 03/14/24 11:12	Analyst: aln
CCPP, Calcium Carbonate Precip. Pot.	73.7	-100	-100	N/A	1	03/14/24	A-01
Method: SM 2540C							
Batch ID: W4B1515	Preparation: _NONE (WETCHEM)			Instr: OVEN17		Prepared: 02/20/24 12:32	Analyst: bel
Total Dissolved Solids	1100	4.0	10	mg/l	1	02/20/24	
Method: SM 4500H+-B							
Batch ID: W4B1456	Preparation: _NONE (WETCHEM)			Instr: AA02		Prepared: 02/16/24 16:41	Analyst: mes
pH	7.54	0.10	0.10	pH Units	1	02/16/24 17:49	*

Metals by EPA 200 Series Methods

Method: [CALC]							
Batch ID: [CALC]	Preparation: [CALC]			Instr: [CALC]		Prepared: 02/23/24 09:40	Analyst: kvm
Hardness as CaCO3, Total	659	0.121	3.31	mg/l		02/26/24	
Method: EPA 200.7							
Batch ID: W4B1958	Preparation: EPA 200.2			Instr: ICP03		Prepared: 02/23/24 09:40	Analyst: kvm
Boron, Total	220	1.3	10	ug/l	1	02/26/24	
Calcium, Total	157	0.0240	0.500	mg/l	1	02/26/24	
Magnesium, Total	64.8	0.0148	0.500	mg/l	1	02/26/24	
Silica as SiO2, Dissolved	43	0.0086	0.10	mg/l	1	02/26/24	
Silica as SiO2, Total	43	0.0086	0.10	mg/l	1	02/26/24	
Method: EPA 200.8							
Batch ID: W4B1962	Preparation: EPA 200.2			Instr: ICPMS06		Prepared: 02/23/24 13:18	Analyst: tyc
Aluminum, Total	ND	4.4	20	ug/l	1	02/26/24	
Arsenic, Total	0.76	0.074	0.40	ug/l	1	02/26/24	
Barium, Total	57	0.14	1.0	ug/l	1	02/26/24	
Copper, Total	2.0	0.23	0.50	ug/l	1	02/26/24	
Iron, Dissolved	ND	3.9	20	ug/l	1	02/26/24	
Lead, Total	ND	0.083	0.20	ug/l	1	02/26/24	
Manganese, Dissolved	ND	0.11	1.0	ug/l	1	02/26/24	
Manganese, Total	ND	0.23	1.0	ug/l	1	02/26/24	
Potassium, Total	3.2	0.068	0.50	mg/l	1	02/26/24	
Selenium, Total	1.7	0.067	0.40	ug/l	1	02/26/24	
Sodium, Total	100	0.10	1.0	mg/l	1	02/26/24	
Strontium, Total	850	0.036	0.20	ug/l	1	02/26/24	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16032-07 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Metals by EPA 200 Series Methods (Continued)							
Method: EPA 200.8				Instr: ICPMS06			
Batch ID: W4B2336		Preparation: EPA 200.2		Prepared: 02/29/24 11:14		Analyst: tyc	
Iron, Total	4.2	3.9	20	ug/l	1	03/01/24	J

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:35 by Earl Garcia

4B16032-07RE1 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by IC, EPA Method 300.0							
Method: EPA 300.0				Instr: LC12			
Batch ID: W4B1477		Preparation: _NONE (LC)		Prepared: 02/18/24 11:58		Analyst: CAM	
Sulfate as SO4	330	0.96	2.0	mg/l	4	02/19/24	M-06

Sample Results

(Continued)

Sample: AT-GS-3-57

Sampled: 02/15/24 14:50 by Earl Garcia

4B16032-08 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Microbiological Parameters by Standard Methods							
Method: SM 9215E				Instr: INC06			
Batch ID: W4B1420		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 19:40		Analyst: rea	
Heterotrophic Plate Count	ND	2.0	2.0	MPN/mL	1	02/17/24	
Method: SM 9221B				Instr: INC12			
Batch ID: W4B1419		Preparation: _NONE (MICROBIOLOGY)		Prepared: 02/15/24 20:40		Analyst: rea	
Total Coliform	ND	1.1	1.1	MPN/100mL	1	02/17/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Sample Results BSK Associates Laboratory Fresno

Sample: AT-GS-4-54 4B16032-01 (Water) Sampled: 02/15/24 9:25 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	88		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	93%		90-115			03/06/24	HT1.0
Dichloroacetate	93%		90-115			03/06/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0							
Bromide	0.62		0.010	mg/L	1	03/01/24	

Sample: AT-GS-4-57 4B16032-02 (Water) Sampled: 02/15/24 11:00 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	380		25	ug/L	5	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	95%		90-115			03/06/24	HT1.0
Dichloroacetate	103%		90-115			03/06/24	

Method: EPA 317.0							
Bromate	ND		1.0	ug/L	1	03/08/24	

General Chemistry

Method: EPA 300.0							
Bromide	1.1		0.020	mg/L	2	03/04/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Sample Results (Continued)

Sample: AT-RES-4-522
 4B16032-03 (Water) Sampled: 02/15/24 11:45 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	170		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	102%		90-115			03/06/24	HT1.0
Dichloroacetate	102%		90-115			03/06/24	

Method: EPA 317.0 **Batch ID:** AHC0136
 Bromate **Prepared:** 03/08/24 15:42
 ND 1.0 ug/L 1 03/08/24 **Analyst:** DXR

General Chemistry							
Method: EPA 300.0							
Bromide	0.58		0.010	mg/L	1	03/01/24	

Sample: AT-RES-3-522
 4B16032-06 (Water) Sampled: 02/15/24 15:20 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1							
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	190		5.0	ug/L	1	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	100%		90-115			03/06/24	HT1.0
Dichloroacetate	100%		90-115			03/06/24	

Method: EPA 317.0 **Batch ID:** AHC0136
 Bromate **Prepared:** 03/08/24 15:54
 ND 1.0 ug/L 1 03/08/24 **Analyst:** DXR

General Chemistry							
Method: EPA 300.0							
Bromide	0.53		0.010	mg/L	1	03/01/24	

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Sample Results (Continued)

Sample: AT-GS-3-57
 4B16032-07 (Water) Sampled: 02/15/24 14:35 by Earl Garcia

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Anions by Ion Chromatography							
Method: EPA 300.1	Batch ID: AHC0219		Prepared: 03/06/24 05:50		Analyst: DXR		
Chlorite	ND		0.0050	mg/L	1	03/06/24	HT1.0
Chlorate	380		25	ug/L	5	03/06/24	
<i>Surrogate(s)</i>							
Dichloroacetate	100%		90-115			03/06/24	HT1.0
Dichloroacetate	102%		90-115			03/06/24	
Method: EPA 317.0	Batch ID: AHC0136		Prepared: 03/07/24 19:27		Analyst: DXR		
Bromate	ND		1.0	ug/L	1	03/07/24	
General Chemistry							
Method: EPA 300.0	Batch ID: AHC0152		Prepared: 03/04/24 16:26		Analyst: AAS		
Bromide	1.1		0.020	mg/L	2	03/04/24	MS1.2

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Quality Control Results

Anions by Ion Chromatography

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: AHC0136 - EPA 317.0									
Blank (AHC0136-BLK1) Prepared & Analyzed: 03/08/24									
Bromate	ND	1.0	ug/L						
LCS (AHC0136-BS1) Prepared & Analyzed: 03/08/24									
Bromate	10	1.0	ug/L	10.0		103 85-115			
LCS Dup (AHC0136-BSD1) Prepared & Analyzed: 03/08/24									
Bromate	10	1.0	ug/L	10.0		103 85-115	0	10	
Matrix Spike (AHC0136-MS1) Source: AHC0050-02 Prepared & Analyzed: 03/08/24									
Bromate	9.2	1.0	ug/L	10.0	ND	92 75-125			
Matrix Spike Dup (AHC0136-MSD1) Source: AHC0050-02 Prepared & Analyzed: 03/08/24									
Bromate	9.1	1.0	ug/L	10.0	ND	91 75-125	1	10	
Batch: AHC0219 - EPA 300.1									
Blank (AHC0219-BLK1) Prepared & Analyzed: 03/05/24									
Chlorate	ND	5.0	ug/L						
Chlorite	ND	0.0050	mg/L						
<i>Surrogate(s)</i>									
Dichloroacetate	0.508		mg/L	0.500		102 90-115			
Dichloroacetate	508		ug/L	500		102 90-115			
LCS (AHC0219-BS1) Prepared & Analyzed: 03/05/24									
Chlorate	200	5.0	ug/L	200		100 85-115			
Chlorite	0.21	0.0050	mg/L	0.200		105 85-115			
<i>Surrogate(s)</i>									
Dichloroacetate	0.512		mg/L	0.500		102 90-115			
Dichloroacetate	512		ug/L	500		102 90-115			
LCS Dup (AHC0219-BSD1) Prepared & Analyzed: 03/05/24									
Chlorate	200	5.0	ug/L	200		100 85-115	0.1	10	
Chlorite	0.21	0.0050	mg/L	0.200		103 85-115	2	10	
<i>Surrogate(s)</i>									
Dichloroacetate	0.525		mg/L	0.500		105 90-115			
Dichloroacetate	525		ug/L	500		105 90-115			
Matrix Spike (AHC0219-MS1) Source: AHB3420-01 Prepared & Analyzed: 03/05/24									
Chlorate	100	5.0	ug/L	100	ND	104 75-125			
Chlorite	0.10	0.0050	mg/L	0.100	ND	104 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.549		mg/L	0.500		110 90-115			
Dichloroacetate	549		ug/L	500		110 90-115			
Matrix Spike (AHC0219-MS2) Source: AHC0050-01 Prepared & Analyzed: 03/06/24									
Chlorate	100	5.0	ug/L	100	ND	105 75-125			
Chlorite	0.097	0.0050	mg/L	0.100	ND	97 75-125			
<i>Surrogate(s)</i>									
Dichloroacetate	0.521		mg/L	0.500		104 90-115			
Dichloroacetate	521		ug/L	500		104 90-115			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Quality Control Results

(Continued)

Anions by Ion Chromatography (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0219 - EPA 300.1 (Continued)										
Matrix Spike Dup (AHC0219-MSD1) Source: AHB3420-01 Prepared & Analyzed: 03/05/24										
Chlorate	99	5.0	ug/L	100	ND	99	75-125	5	10	
Chlorite	0.10	0.0050	mg/L	0.100	ND	105	75-125	0.6	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.555		mg/L	0.500		111	90-115			
Dichloroacetate	555		ug/L	500		111	90-115			
Matrix Spike Dup (AHC0219-MSD2) Source: AHC0050-01 Prepared & Analyzed: 03/06/24										
Chlorate	100	5.0	ug/L	100	ND	104	75-125	0.9	10	
Chlorite	0.096	0.0050	mg/L	0.100	ND	96	75-125	1	10	
<i>Surrogate(s)</i>										
Dichloroacetate	0.509		mg/L	0.500		102	90-115			
Dichloroacetate	509		ug/L	500		102	90-115			

Quality Control Results

(Continued)

General Chemistry

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: AHC0060 - EPA 300.0										
Blank (AHC0060-BLK1) Prepared & Analyzed: 03/01/24										
Bromide	ND	0.010	mg/L							
LCS (AHC0060-BS1) Prepared & Analyzed: 03/01/24										
Bromide	0.19	0.010	mg/L	0.200		96	90-110			
Matrix Spike (AHC0060-MS1) Source: AHB3708-01 Prepared & Analyzed: 03/01/24										
Bromide	0.096	0.010	mg/L	0.100	ND	96	80-120			
Matrix Spike (AHC0060-MS2) Source: AHC0055-03 Prepared & Analyzed: 03/01/24										
Bromide	0.40	0.010	mg/L	0.100	0.34	60	80-120			MS1.0
Matrix Spike Dup (AHC0060-MSD1) Source: AHB3708-01 Prepared & Analyzed: 03/01/24										
Bromide	0.097	0.010	mg/L	0.100	ND	97	80-120	1	10	
Matrix Spike Dup (AHC0060-MSD2) Source: AHC0055-03 Prepared & Analyzed: 03/01/24										
Bromide	0.41	0.010	mg/L	0.100	0.34	69	80-120	2	10	MS1.0
Batch: AHC0152 - EPA 300.0										
Blank (AHC0152-BLK1) Prepared & Analyzed: 03/04/24										
Bromide	ND	0.010	mg/L							
LCS (AHC0152-BS1) Prepared & Analyzed: 03/04/24										
Bromide	0.19	0.010	mg/L	0.200		95	90-110			
Matrix Spike (AHC0152-MS1) Source: AHC0045-05RE1 Prepared & Analyzed: 03/04/24										
Bromide	1.2	0.020	mg/L	0.200	1.1	44	80-120			MS1.0
Matrix Spike Dup (AHC0152-MSD1) Source: AHC0045-05RE1 Prepared & Analyzed: 03/04/24										
Bromide	1.2	0.020	mg/L	0.200	1.1	49	80-120	0.9	10	MS1.0

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Quality Control Results (Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1477 - EPA 300.0											
Blank (W4B1477-BLK1)					Prepared & Analyzed: 02/18/24						
Chloride, Total	ND	0.19	0.50	mg/l							
Fluoride, Total	ND	0.0090	0.10	mg/l							
Sulfate as SO4	ND	0.24	0.50	mg/l							
LCS (W4B1477-BS1)					Prepared & Analyzed: 02/18/24						
Chloride, Total	20.2	0.19	0.50	mg/l	20.0		101	90-110			
Fluoride, Total	1.90	0.0090	0.10	mg/l	2.00		95	90-110			
Sulfate as SO4	19.6	0.24	0.50	mg/l	20.0		98	90-110			
Matrix Spike (W4B1477-MS1)					Source: 4B12018-01		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	384	1.9	5.0	mg/l	200	155	115	76-118			
Fluoride, Total	20.4	0.090	1.0	mg/l	20.0	0.197	101	86-107			
Sulfate as SO4	1070	2.4	5.0	mg/l	200	565	252	78-111			MS-01
Matrix Spike (W4B1477-MS2)					Source: 4B12018-02		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	387	1.9	5.0	mg/l	200	159	114	76-118			
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.189	100	86-107			
Sulfate as SO4	879	2.4	5.0	mg/l	200	467	206	78-111			MS-01
Matrix Spike Dup (W4B1477-MSD1)					Source: 4B12018-01		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	383	1.9	5.0	mg/l	200	155	114	76-118	0.3	20	
Fluoride, Total	20.4	0.090	1.0	mg/l	20.0	0.197	101	86-107	0.1	20	
Sulfate as SO4	1070	2.4	5.0	mg/l	200	565	251	78-111	0.2	20	MS-01
Matrix Spike Dup (W4B1477-MSD2)					Source: 4B12018-02		Prepared: 02/18/24 Analyzed: 02/19/24				
Chloride, Total	386	1.9	5.0	mg/l	200	159	113	76-118	0.3	20	
Fluoride, Total	20.2	0.090	1.0	mg/l	20.0	0.189	100	86-107	0.1	20	
Sulfate as SO4	877	2.4	5.0	mg/l	200	467	205	78-111	0.2	20	MS-01

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1365 - EPA 140.1										
Blank (W4B1365-BLK1) Prepared & Analyzed: 02/15/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1365-DUP1) Source: 4B15126-01 Prepared & Analyzed: 02/15/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Duplicate (W4B1365-DUP2) Source: 4B16032-06 Prepared & Analyzed: 02/15/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1421 - SM 2120B										
LCS (W4B1421-BS1) Prepared & Analyzed: 02/16/24										
Color	10.0		3.0	Color Units	10.0		100 95-105			
Duplicate (W4B1421-DUP1) Source: 4B16032-07 Prepared & Analyzed: 02/16/24										
Color	ND		3.0	Color Units		ND			10	
Batch: W4B1429 - EPA 140.1										
Blank (W4B1429-BLK1) Prepared & Analyzed: 02/16/24										
Threshold Odor Number	1.0		1.0	T.O.N.						J
Duplicate (W4B1429-DUP1) Source: 4B16032-07 Prepared & Analyzed: 02/16/24										
Threshold Odor Number	1.0		1.0	T.O.N.		1.0		0	20	J
Batch: W4B1446 - EPA 353.2										
Blank (W4B1446-BLK1) Prepared & Analyzed: 02/16/24										
Nitrate as N	ND	0.040	0.20	mg/l						
Nitrite as N	ND	42	100	ug/l						
LCS (W4B1446-BS1) Prepared & Analyzed: 02/16/24										
Nitrate as N	1.01	0.040	0.20	mg/l	1.00		101 90-110			
Nitrite as N	1040	42	100	ug/l	1000		104 90-110			
Matrix Spike (W4B1446-MS1) Source: 4B01037-10 Prepared & Analyzed: 02/16/24										
Nitrate as N	2.29	0.040	0.20	mg/l	2.00	0.311	99 90-110			
Nitrite as N	1040	42	100	ug/l	1000	ND	104 90-110			
Matrix Spike (W4B1446-MS2) Source: 4B15128-01 Prepared & Analyzed: 02/16/24										
Nitrate as N	2.56	0.040	0.20	mg/l	2.00	0.529	102 90-110			
Nitrite as N	1090	42	100	ug/l	1000	ND	109 90-110			
Matrix Spike Dup (W4B1446-MSD1) Source: 4B01037-10 Prepared & Analyzed: 02/16/24										
Nitrate as N	2.28	0.040	0.20	mg/l	2.00	0.311	98 90-110	0.4	20	
Nitrite as N	1030	42	100	ug/l	1000	ND	103 90-110	1	20	
Matrix Spike Dup (W4B1446-MSD2) Source: 4B15128-01 Prepared & Analyzed: 02/16/24										
Nitrate as N	2.58	0.040	0.20	mg/l	2.00	0.529	103 90-110	0.8	20	
Nitrite as N	1090	42	100	ug/l	1000	ND	109 90-110	0	20	
Batch: W4B1456 - SM 4500H+-B										
LCS (W4B1456-BS1) Prepared & Analyzed: 02/16/24										
pH	6.93	0.10	0.10	pH Units	6.86		101 98.8-101			

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4B1456 - SM 4500H+-B (Continued)										
Duplicate (W4B1456-DUP1) Source: 4B01037-01 Prepared & Analyzed: 02/16/24										
pH	7.17	0.10	0.10	pH Units		7.07		1	3.1	
Batch: W4B1508 - SM 2320B										
Blank (W4B1508-BLK1) Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	ND	7.2	20	mg/l						
Bicarbonate Alkalinity as HCO3	ND	8.8	24	mg/l						
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l						
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l						
LCS (W4B1508-BS1) Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	89.1	7.2	20	mg/l	87.8		101 94-108			
Bicarbonate Alkalinity as HCO3	109	8.8	24	mg/l	107		102 95-108			
Duplicate (W4B1508-DUP1) Source: 4B01037-01 Prepared & Analyzed: 02/20/24										
Alkalinity as CaCO3	333	7.2	20	mg/l		335		0.6	15	
Bicarbonate Alkalinity as HCO3	406	8.8	24	mg/l		408		0.6	15	
Carbonate Alkalinity as CaCO3	ND	7.2	20	mg/l		ND			200	
Hydroxide Alkalinity as CaCO3	ND	7.2	20	mg/l		ND			200	
Batch: W4B1515 - SM 2540C										
Blank (W4B1515-BLK1) Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	ND	4.0	10	mg/l						
LCS (W4B1515-BS1) Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	801	4.0	10	mg/l	824		97 97-103			
Duplicate (W4B1515-DUP1) Source: 4B15148-01 Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	12300	4.0	10	mg/l		12400		1	10	
Duplicate (W4B1515-DUP2) Source: 4B16032-07 Prepared & Analyzed: 02/20/24										
Total Dissolved Solids	1050	4.0	10	mg/l		1070		2	10	
Batch: W4C0522 - EPA 365.3										
Blank (W4C0522-BLK1) Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO4, Total	ND	0.021	0.030	mg/l						
LCS (W4C0522-BS1) Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO4, Total	0.592	0.021	0.030	mg/l	0.612		97 90-110			
Matrix Spike (W4C0522-MS1) Source: 4B15058-07 Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO4, Total	0.611	0.021	0.030	mg/l	0.612	ND	100 90-110			
Matrix Spike Dup (W4C0522-MSD1) Source: 4B15058-07 Prepared: 03/07/24 Analyzed: 03/11/24										
Phosphorus as PO4, Total	0.501	0.021	0.030	mg/l	0.612	ND	82 90-110	20	20	MS-01
Batch: W4C0696 - EPA 351.2										
Blank (W4C0696-BLK1) Prepared: 03/08/24 Analyzed: 03/11/24										
TKN	ND	0.065	0.10	mg/l						
Blank (W4C0696-BLK2) Prepared: 03/08/24 Analyzed: 03/11/24										

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Quality Control Results (Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W4C0696 - EPA 351.2 (Continued)											
Blank (W4C0696-BLK2)											
TKN	ND	0.065	0.10	mg/l							
LCS (W4C0696-BS1)											
TKN	0.964	0.065	0.10	mg/l	1.00		96	90-110			
LCS (W4C0696-BS2)											
TKN	0.943	0.065	0.10	mg/l	1.00		94	90-110			
Matrix Spike (W4C0696-MS1)											
TKN	1.47	0.065	0.10	mg/l	1.00	0.459	101	90-110			
Matrix Spike (W4C0696-MS2)											
TKN	2.27	0.065	0.10	mg/l	1.00	1.45	82	90-110			MS-02
Matrix Spike Dup (W4C0696-MSD1)											
TKN	1.45	0.065	0.10	mg/l	1.00	0.459	100	90-110	0.9	10	
Matrix Spike Dup (W4C0696-MSD2)											
TKN	2.24	0.065	0.10	mg/l	1.00	1.45	79	90-110	1	10	MS-02
Batch: W4C0794 - EPA 350.1											
Blank (W4C0794-BLK1)											
Ammonia as N	ND	0.017	0.10	mg/l							
Blank (W4C0794-BLK2)											
Ammonia as N	ND	0.017	0.10	mg/l							
LCS (W4C0794-BS1)											
Ammonia as N	0.244	0.017	0.10	mg/l	0.250		97	90-110			
LCS (W4C0794-BS2)											
Ammonia as N	0.253	0.017	0.10	mg/l	0.250		101	90-110			
Matrix Spike (W4C0794-MS1)											
Ammonia as N	0.261	0.017	0.10	mg/l	0.250	0.0237	95	90-110			
Matrix Spike (W4C0794-MS2)											
Ammonia as N	1.02	0.017	0.10	mg/l	0.250	0.784	94	90-110			
Matrix Spike Dup (W4C0794-MSD1)											
Ammonia as N	0.262	0.017	0.10	mg/l	0.250	0.0237	95	90-110	0.4	15	
Matrix Spike Dup (W4C0794-MSD2)											
Ammonia as N	1.02	0.017	0.10	mg/l	0.250	0.784	93	90-110	0.3	15	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Quality Control Results (Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qualifier
Batch: W4B1958 - EPA 200.7											
Blank (W4B1958-BLK1)					Prepared: 02/23/24 Analyzed: 02/26/24						
Boron, Total	ND	1.3	10	ug/l							
Calcium, Total	ND	0.0240	0.500	mg/l							
Magnesium, Total	ND	0.0148	0.500	mg/l							
Silica as SiO2, Dissolved	0.0169	0.0086	0.10	mg/l							J
Silica as SiO2, Total	0.0185	0.0086	0.10	mg/l							J
LCS (W4B1958-BS1)					Prepared: 02/23/24 Analyzed: 02/26/24						
Boron, Total	226	1.3	10	ug/l	200		113	85-115			
Calcium, Total	50.9	0.0240	0.500	mg/l	50.2		101	85-115			
Magnesium, Total	50.7	0.0148	0.500	mg/l	50.2		101	85-115			
Silica as SiO2, Dissolved	46.6	0.0086	0.10	mg/l	43.2		108	85-115			
Silica as SiO2, Total	46.6	0.0086	0.10	mg/l	43.2		108	85-115			
Matrix Spike (W4B1958-MS1)					Source: 4B14107-01 Prepared: 02/23/24 Analyzed: 02/26/24						
Boron, Total	777	1.3	10	ug/l	200	545	116	70-130			
Calcium, Total	117	0.0240	0.500	mg/l	50.2	69.4	96	70-130			
Magnesium, Total	65.8	0.0148	0.500	mg/l	50.2	15.6	100	70-130			
Silica as SiO2, Dissolved	70.2	0.0086	0.10	mg/l	43.2	24.2	107	70-130			
Silica as SiO2, Total	70.2	0.0086	0.10	mg/l	43.2	24.0	107	70-130			
Matrix Spike (W4B1958-MS2)					Source: 4B14142-01 Prepared: 02/23/24 Analyzed: 02/26/24						
Boron, Total	371	1.3	10	ug/l	200	140	116	70-130			
Calcium, Total	168	0.0240	0.500	mg/l	50.2	120	96	70-130			
Magnesium, Total	106	0.0148	0.500	mg/l	50.2	55.7	100	70-130			
Silica as SiO2, Dissolved	86.5	0.0086	0.10	mg/l	43.2	39.8	108	70-130			
Silica as SiO2, Total	86.5	0.0086	0.10	mg/l	43.2	40.1	107	70-130			
Matrix Spike Dup (W4B1958-MSD1)					Source: 4B14107-01 Prepared: 02/23/24 Analyzed: 02/26/24						
Boron, Total	783	1.3	10	ug/l	200	545	119	70-130	0.7	30	
Calcium, Total	119	0.0240	0.500	mg/l	50.2	69.4	99	70-130	1	30	
Magnesium, Total	66.7	0.0148	0.500	mg/l	50.2	15.6	102	70-130	1	30	
Silica as SiO2, Dissolved	70.9	0.0086	0.10	mg/l	43.2	24.2	108	70-130	0.9	30	
Silica as SiO2, Total	70.9	0.0086	0.10	mg/l	43.2	24.0	108	70-130	0.9	30	
Matrix Spike Dup (W4B1958-MSD2)					Source: 4B14142-01 Prepared: 02/23/24 Analyzed: 02/26/24						
Boron, Total	371	1.3	10	ug/l	200	140	116	70-130	0.06	30	
Calcium, Total	168	0.0240	0.500	mg/l	50.2	120	96	70-130	0.04	30	
Magnesium, Total	106	0.0148	0.500	mg/l	50.2	55.7	100	70-130	0.1	30	
Silica as SiO2, Dissolved	86.9	0.0086	0.10	mg/l	43.2	39.8	109	70-130	0.4	30	
Silica as SiO2, Total	86.9	0.0086	0.10	mg/l	43.2	40.1	108	70-130	0.4	30	
Batch: W4B1962 - EPA 200.8											
Blank (W4B1962-BLK1)					Prepared: 02/23/24 Analyzed: 02/26/24						
Aluminum, Total	ND	4.4	20	ug/l							

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-----	-------	-------------	---------------	------	--------	-----	-----------	-----------

Batch: W4B1962 - EPA 200.8 (Continued)

Blank (W4B1962-BLK1)

Prepared: 02/23/24 Analyzed: 02/26/24

Antimony, Total	ND	0.089	0.50	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Barium, Total	ND	0.14	1.0	ug/l							
Beryllium, Total	ND	0.029	0.10	ug/l							
Cadmium, Total	ND	0.042	0.20	ug/l							
Chromium, Total	ND	0.089	0.20	ug/l							
Copper, Total	ND	0.23	0.50	ug/l							
Iron, Dissolved	ND	3.9	20	ug/l							
Iron, Total	9.55	3.9	20	ug/l							J
Lead, Total	ND	0.083	0.20	ug/l							
Manganese, Dissolved	ND	0.11	1.0	ug/l							
Manganese, Total	ND	0.23	1.0	ug/l							
Nickel, Total	ND	0.40	2.0	ug/l							
Potassium, Total	ND	0.068	0.50	mg/l							
Selenium, Total	ND	0.067	0.40	ug/l							
Silver, Total	ND	0.027	0.20	ug/l							
Sodium, Total	ND	0.10	1.0	mg/l							
Strontium, Total	ND	0.036	0.20	ug/l							
Thallium, Total	ND	0.021	0.20	ug/l							
Uranium, Total	ND	0.02	0.20	ug/l							
Vanadium, Total	ND	0.16	0.50	ug/l							
Zinc, Total	ND	1.7	10	ug/l							

LCS (W4B1962-BS1)

Prepared: 02/23/24 Analyzed: 02/26/24

Aluminum, Total	45.1	4.4	20	ug/l	50.0		90	85-115			
Antimony, Total	51.1	0.089	0.50	ug/l	50.0		102	85-115			
Arsenic, Total	50.7	0.074	0.40	ug/l	50.0		101	85-115			
Barium, Total	50.3	0.14	1.0	ug/l	50.0		101	85-115			
Beryllium, Total	47.1	0.029	0.10	ug/l	50.0		94	85-115			
Cadmium, Total	50.3	0.042	0.20	ug/l	50.0		100	85-115			
Chromium, Total	51.0	0.089	0.20	ug/l	50.0		102	85-115			
Copper, Total	51.8	0.23	0.50	ug/l	50.0		103	85-115			
Iron, Dissolved	1130	3.9	20	ug/l	1050		108	85-115			
Iron, Total	1130	3.9	20	ug/l	1050		108	85-115			
Lead, Total	50.2	0.083	0.20	ug/l	50.0		100	85-115			
Manganese, Dissolved	49.8	0.11	1.0	ug/l	50.0		100	85-115			
Manganese, Total	49.8	0.23	1.0	ug/l	50.0		100	85-115			
Nickel, Total	51.9	0.40	2.0	ug/l	50.0		104	85-115			
Potassium, Total	1.99	0.068	0.50	mg/l	2.05		97	85-115			
Selenium, Total	50.1	0.067	0.40	ug/l	50.0		100	85-115			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-----	-------	-------------	---------------	------	--------	-----	-----------	-----------

Batch: W4B1962 - EPA 200.8 (Continued)

LCS (W4B1962-BS1)

Prepared: 02/23/24 Analyzed: 02/26/24

Silver, Total	51.1	0.027	0.20	ug/l	50.0		102	85-115			
Sodium, Total	2.09	0.10	1.0	mg/l	2.05		102	85-115			
Strontium, Total	47.0	0.036	0.20	ug/l	50.0		94	85-115			
Thallium, Total	48.2	0.021	0.20	ug/l	50.0		96	85-115			
Uranium, Total	48.7	0.02	0.20	ug/l	50.0		97	85-115			
Vanadium, Total	52.6	0.16	0.50	ug/l	50.0		105	85-115			
Zinc, Total	49.2	1.7	10	ug/l	50.0		98	85-115			

Matrix Spike (W4B1962-MS1)

Source: 4B14107-04

Prepared: 02/23/24 Analyzed: 02/26/24

Aluminum, Total	46.5	4.4	20	ug/l	50.0	ND	93	70-130			
Antimony, Total	50.6	0.089	0.50	ug/l	50.0	ND	101	70-130			
Arsenic, Total	50.6	0.074	0.40	ug/l	50.0	ND	101	70-130			
Barium, Total	50.2	0.14	1.0	ug/l	50.0	ND	100	70-130			
Beryllium, Total	48.3	0.029	0.10	ug/l	50.0	ND	97	70-130			
Cadmium, Total	50.0	0.042	0.20	ug/l	50.0	ND	100	70-130			
Chromium, Total	51.4	0.089	0.20	ug/l	50.0	ND	103	70-130			
Copper, Total	52.0	0.23	0.50	ug/l	50.0	ND	104	70-130			
Iron, Dissolved	1190	3.9	20	ug/l	1050	ND	113	70-130			
Iron, Total	1190	3.9	20	ug/l	1050	ND	113	70-130			
Lead, Total	50.2	0.083	0.20	ug/l	50.0	ND	100	70-130			
Manganese, Dissolved	50.2	0.11	1.0	ug/l	50.0	ND	100	70-130			
Manganese, Total	50.2	0.23	1.0	ug/l	50.0	ND	100	70-130			
Nickel, Total	52.4	0.40	2.0	ug/l	50.0	ND	105	70-130			
Potassium, Total	2.02	0.068	0.50	mg/l	2.05	ND	99	70-130			
Selenium, Total	49.6	0.067	0.40	ug/l	50.0	ND	99	70-130			
Silver, Total	50.7	0.027	0.20	ug/l	50.0	ND	101	70-130			
Sodium, Total	2.10	0.10	1.0	mg/l	2.05	ND	102	70-130			
Strontium, Total	47.4	0.036	0.20	ug/l	50.0	ND	95	70-130			
Thallium, Total	48.4	0.021	0.20	ug/l	50.0	ND	97	70-130			
Uranium, Total	48.6	0.02	0.20	ug/l	50.0	ND	97	70-130			
Vanadium, Total	52.4	0.16	0.50	ug/l	50.0	ND	105	70-130			
Zinc, Total	49.0	1.7	10	ug/l	50.0	ND	98	70-130			

Matrix Spike (W4B1962-MS2)

Source: 4B16032-01

Prepared: 02/23/24 Analyzed: 02/26/24

Aluminum, Total	46.6	4.4	20	ug/l	50.0	ND	93	70-130			
Antimony, Total	52.9	0.089	0.50	ug/l	50.0	0.283	105	70-130			
Arsenic, Total	52.5	0.074	0.40	ug/l	50.0	0.687	104	70-130			
Barium, Total	108	0.14	1.0	ug/l	50.0	56.4	103	70-130			
Beryllium, Total	47.0	0.029	0.10	ug/l	50.0	ND	94	70-130			
Cadmium, Total	50.0	0.042	0.20	ug/l	50.0	ND	100	70-130			
Chromium, Total	52.2	0.089	0.20	ug/l	50.0	2.02	100	70-130			

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Quality Control Results (Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Qualifier
---------	--------	-----	-----	-------	-------------	---------------	------	-------	-----	-----------	-----------

Batch: W4B1962 - EPA 200.8 (Continued)

Matrix Spike (W4B1962-MS2)	Source: 4B16032-01			Prepared: 02/23/24 Analyzed: 02/26/24							
Copper, Total	49.4	0.23	0.50	ug/l	50.0	ND	99	70-130			
Iron, Dissolved	1150	3.9	20	ug/l	1050	ND	110	70-130			
Iron, Total	1150	3.9	20	ug/l	1050	21.5	108	70-130			
Lead, Total	50.4	0.083	0.20	ug/l	50.0	ND	101	70-130			
Manganese, Dissolved	62.0	0.11	1.0	ug/l	50.0	12.0	100	70-130			
Manganese, Total	62.0	0.23	1.0	ug/l	50.0	14.5	95	70-130			
Nickel, Total	51.0	0.40	2.0	ug/l	50.0	1.05	100	70-130			
Potassium, Total	4.38	0.068	0.50	mg/l	2.05	2.55	89	70-130			
Selenium, Total	53.3	0.067	0.40	ug/l	50.0	3.90	99	70-130			
Silver, Total	50.1	0.027	0.20	ug/l	50.0	ND	100	70-130			
Sodium, Total	104	0.10	1.0	mg/l	2.05	108	NR	70-130			MS-02
Strontium, Total	645	0.036	0.20	ug/l	50.0	571	147	70-130			MS-02
Thallium, Total	48.6	0.021	0.20	ug/l	50.0	ND	97	70-130			
Uranium, Total	71.3	0.02	0.20	ug/l	50.0	20.2	102	70-130			
Vanadium, Total	57.4	0.16	0.50	ug/l	50.0	5.18	104	70-130			
Zinc, Total	47.6	1.7	10	ug/l	50.0	ND	95	70-130			

Matrix Spike Dup (W4B1962-MSD1)	Source: 4B14107-04			Prepared: 02/23/24 Analyzed: 02/26/24							
Aluminum, Total	48.0	4.4	20	ug/l	50.0	ND	96	70-130	3	30	
Antimony, Total	50.9	0.089	0.50	ug/l	50.0	ND	102	70-130	0.6	30	
Arsenic, Total	50.9	0.074	0.40	ug/l	50.0	ND	102	70-130	0.6	30	
Barium, Total	50.3	0.14	1.0	ug/l	50.0	ND	100	70-130	0.1	30	
Beryllium, Total	47.7	0.029	0.10	ug/l	50.0	ND	95	70-130	1	30	
Cadmium, Total	50.4	0.042	0.20	ug/l	50.0	ND	101	70-130	0.8	30	
Chromium, Total	52.2	0.089	0.20	ug/l	50.0	ND	104	70-130	2	30	
Copper, Total	52.8	0.23	0.50	ug/l	50.0	ND	106	70-130	2	30	
Iron, Dissolved	1170	3.9	20	ug/l	1050	ND	112	70-130	1	30	
Iron, Total	1170	3.9	20	ug/l	1050	ND	112	70-130	1	30	
Lead, Total	49.7	0.083	0.20	ug/l	50.0	ND	99	70-130	0.8	30	
Manganese, Dissolved	50.3	0.11	1.0	ug/l	50.0	ND	100	70-130	0.1	30	
Manganese, Total	50.3	0.23	1.0	ug/l	50.0	ND	100	70-130	0.1	30	
Nickel, Total	53.3	0.40	2.0	ug/l	50.0	ND	106	70-130	2	30	
Potassium, Total	2.05	0.068	0.50	mg/l	2.05	ND	100	70-130	1	30	
Selenium, Total	50.3	0.067	0.40	ug/l	50.0	ND	101	70-130	1	30	
Silver, Total	51.5	0.027	0.20	ug/l	50.0	ND	103	70-130	2	30	
Sodium, Total	2.12	0.10	1.0	mg/l	2.05	ND	103	70-130	1	30	
Strontium, Total	47.7	0.036	0.20	ug/l	50.0	ND	95	70-130	0.6	30	
Thallium, Total	47.8	0.021	0.20	ug/l	50.0	ND	95	70-130	1	30	
Uranium, Total	48.5	0.02	0.20	ug/l	50.0	ND	97	70-130	0.1	30	
Vanadium, Total	53.0	0.16	0.50	ug/l	50.0	ND	106	70-130	1	30	

Brown and Caldwell - Los Angeles
801 South Figueroa Street, Suite 950
Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
05/13/2024 13:20

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Qualifier	
Batch: W4B1962 - EPA 200.8 (Continued)										
Matrix Spike Dup (W4B1962-MSD1) Source: 4B14107-04 Prepared: 02/23/24 Analyzed: 02/26/24										
Zinc, Total	50.5	1.7	10	ug/l	50.0	ND	101 70-130	3 30		
Matrix Spike Dup (W4B1962-MSD2) Source: 4B16032-01 Prepared: 02/23/24 Analyzed: 02/26/24										
Aluminum, Total	47.6	4.4	20	ug/l	50.0	ND	95 70-130	2 30		
Antimony, Total	52.8	0.089	0.50	ug/l	50.0	0.283	105 70-130	0.3 30		
Arsenic, Total	52.0	0.074	0.40	ug/l	50.0	0.687	103 70-130	0.9 30		
Barium, Total	107	0.14	1.0	ug/l	50.0	56.4	102 70-130	0.6 30		
Beryllium, Total	49.0	0.029	0.10	ug/l	50.0	ND	98 70-130	4 30		
Cadmium, Total	50.0	0.042	0.20	ug/l	50.0	ND	100 70-130	0.2 30		
Chromium, Total	53.5	0.089	0.20	ug/l	50.0	2.02	103 70-130	3 30		
Copper, Total	50.3	0.23	0.50	ug/l	50.0	ND	100 70-130	2 30		
Iron, Dissolved	1180	3.9	20	ug/l	1050	ND	113 70-130	3 30		
Iron, Total	1180	3.9	20	ug/l	1050	21.5	110 70-130	3 30		
Lead, Total	50.5	0.083	0.20	ug/l	50.0	ND	101 70-130	0.2 30		
Manganese, Dissolved	63.9	0.11	1.0	ug/l	50.0	12.0	104 70-130	3 30		
Manganese, Total	63.9	0.23	1.0	ug/l	50.0	14.5	99 70-130	3 30		
Nickel, Total	51.2	0.40	2.0	ug/l	50.0	1.05	100 70-130	0.4 30		
Potassium, Total	4.47	0.068	0.50	mg/l	2.05	2.55	94 70-130	2 30		
Selenium, Total	53.3	0.067	0.40	ug/l	50.0	3.90	99 70-130	0.04 30		
Silver, Total	50.6	0.027	0.20	ug/l	50.0	ND	101 70-130	0.8 30		
Sodium, Total	107	0.10	1.0	mg/l	2.05	108	NR 70-130	2 30	MS-02	
Strontium, Total	636	0.036	0.20	ug/l	50.0	571	128 70-130	1 30		
Thallium, Total	48.7	0.021	0.20	ug/l	50.0	ND	97 70-130	0.3 30		
Uranium, Total	71.7	0.02	0.20	ug/l	50.0	20.2	103 70-130	0.6 30		
Vanadium, Total	58.8	0.16	0.50	ug/l	50.0	5.18	107 70-130	2 30		
Zinc, Total	47.8	1.7	10	ug/l	50.0	ND	96 70-130	0.5 30		
Batch: W4B2336 - EPA 200.8										
Blank (W4B2336-BLK1) Prepared: 02/29/24 Analyzed: 03/01/24										
Iron, Total	ND	3.9	20	ug/l						
LCS (W4B2336-BS1) Prepared: 02/29/24 Analyzed: 03/01/24										
Iron, Total	1150	3.9	20	ug/l	1050		110 85-115			
Matrix Spike (W4B2336-MS1) Source: 4B15017-02 Prepared: 02/29/24 Analyzed: 03/01/24										
Iron, Total	1230	3.9	20	ug/l	1050	117	106 70-130			
Matrix Spike (W4B2336-MS2) Source: 4B21219-01 Prepared: 02/29/24 Analyzed: 03/01/24										
Iron, Total	16900	7.9	40	ug/l	1050	13900	290 70-130		MS-02	
Matrix Spike Dup (W4B2336-MSD1) Source: 4B15017-02 Prepared: 02/29/24 Analyzed: 03/01/24										
Iron, Total	1240	3.9	20	ug/l	1050	117	107 70-130	0.4 30		
Matrix Spike Dup (W4B2336-MSD2) Source: 4B21219-01 Prepared: 02/29/24 Analyzed: 03/01/24										
Iron, Total	15900	7.9	40	ug/l	1050	13900	187 70-130	7 30	MS-02	



Certificate of Analysis

FINAL REPORT

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Quality Control Results (Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC		RPD		Qualifier
								Limits	RPD	Limit	Limit	
Batch: W4B1419 - SM 9221B												
Blank (W4B1419-BLK1)												
Total Coliform	ND	1.1	1.1	MPN/100m L								

Prepared: 02/15/24 Analyzed: 02/17/24

Brown and Caldwell - Los Angeles
 801 South Figueroa Street, Suite 950
 Los Angeles, CA 90017

Project Number: City of Santa Monica - Background Water Quality
Project Manager: Brown & Caldwell

Reported:
 05/13/2024 13:20

Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
A-01	Calculation is based on source temperature @20C
HT1.0	Holding time exceeded. Sample was received at the lab past holding time.
J	Estimated conc. detected <MRL and >MDL.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS1.0	Matrix spike recoveries exceed control limits.
MS1.2	Matrix spike recovery exceeds lower control limit. Reported results for parent matrix should be considered estimated due to matrix interferences.
O-09	This sample was received with the EPA recommended holding time expired.
O-15	The sample was received with the recommended holding time nearly expired. It was analyzed as soon as possible but the maximum holding time was slightly exceeded.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	A result of ND for odor corresponds to No Odor Observed
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
[CALC]	An automated calculation using unrounded values then rounding the final result (scientific rounding rules). Calculations do not contain direct qualifiers; please refer to the individual components of the calculation for any qualifiers
Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.	
All results are expressed on wet weight basis unless otherwise specified.	
All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.	
Hardness as CaCO ₃ , Total consist of the following components Magnesium, Total; and Calcium, Total	



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745
Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

Work Order #

4816032

Page 1 Of 1

CLIENT NAME: Brown and Caldwell - Los Angeles	PROJECT: COSM 97-005 - Background Water Quality	ANALYSES REQUESTED										SPECIAL HANDLING						
ADDRESS: 1000 Wilshire Boulevard, Suite 1690 Los Angeles, CA 90018	PHONE: (213) 271-2237 ckindie@BrwnCald.com invoice to Rose Ford, Rford@BrwnCald.com	140.1 Odor, 2120B Color	200.7/200.8 Total&Dissolved Metals*	alkalinity, TDS	300.0 Cl, F, SO4	300.1**	350.1 Ammonia, 353.2 NO2, NO3	365.3 PO4	Aggressive Index, CCPP, LSI, Hardness	9215E TPC-Simplate	9221 MTFT	<input type="checkbox"/> Same Day Rush 150%	<input type="checkbox"/> 24 Hour Rush 100%	<input type="checkbox"/> 48-72 Hour Rush 75%	<input type="checkbox"/> 4 - 5 Day Rush 30%	<input type="checkbox"/> Rush Extractions 50%	<input type="checkbox"/> 10 - 15 Business Days	<input type="checkbox"/> QA/QC Data Package
PROJECT MANAGER Chris Kindle	SAMPLER Earl Garcia											Charges will apply for weekends/holidays						

ID# (For Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	140.1 Odor, 2120B Color	200.7/200.8 Total&Dissolved Metals*	alkalinity, TDS	300.0 Cl, F, SO4	300.1**	350.1 Ammonia, 353.2 NO2, NO3	365.3 PO4	Aggressive Index, CCPP, LSI, Hardness	9215E TPC-Simplate	9221 MTFT	COMMENTS
	2/15/24	9:25	g ^{wb}	AT-GS-4-54	10	X	X	X	X	X	X	X	X	X	X	*Bacteriological Testing has a strict 8 hour holding time. Lab must receive the samples within 6 hours of collection to have sufficient time to prepare and incubate the samples before expiration.
	2/15/24	11:00	g ^{wb}	AT-GS-4-57	10	X	X	X	X	X	X	X	X	X	X	
	2/15/24	11:45	g ^{wb}	AT-RES-4-522	10	X	X	X	X	X	X	X	X	X	X	
	2/15/24	11:55	g ^{wb}	Field Blank (AT-RES-4-522)	1											
	2/15/24	11:55	g ^{wb}	Trip Blank (AT-RES-4-522)	2											*Total Metals: B, Ca, Fe, K, Mg, Na, Silica, Al, As, Ba, Cu, Mn, Pb, Se, Sr
2/15/24	2/14/24	15:20	g ^{wb}	AT-RES-3-522	10	X	X	X	X	X	X	X	X	X	X	*Dissolved Metals: Fe, Silica, Mn
	2/14/24	14:35	g ^{wb}	AT-GS-3-57	9	X	X	X	X	X	X	X	X	X	X	
	2/15/24	14:50	g ^{wb}	AT-GS-3-57	1									X	X	**300.1: Bromate, Bromide, Chlorate, Chlorite
	2/15/24	14:50	g ^{wb}	Field Blank (AT-RES-3-522)	1											
	2/15/24	14:50	g ^{wb}	Trip Blank (AT-RES-3-522)	2											

RELINQUISHED BY Helia Ny	DATE / TIME 2/15/24 15:40	RECEIVED BY C. Do	SAMPLE CONDITION: Actual Temperature: 2.22 Received On Ice Preserved Evidence Seals Present Container Attacked Preserved at Lab	SAMPLE TYPE CODE: AQ=Aqueous NA= Non Aqueous SL = Sludge DW = Drinking Water WW = Waste Water RW = Rain Water GW = Ground Water SO = Soil SW = Solid Waste OL = Oil OT = Other Matrix
RELINQUISHED BY C. Do	DATE / TIME 2/15/24 18:38	RECEIVED BY Tanner Ozlesky 1838		
RELINQUISHED BY	DATE / TIME	RECEIVED BY		



Sample Receipt Checklist

Weck WKO: **4B16032**

WKO Logged by: Jerico Bolotano

Samples Checked by: Jerico Bolotano

Date/Time Received: 02/15/24 @ 18:38

of Samples: 08

Delivered by: RMS

Task	Yes	No	N/A	Comments
COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified about COC discrepancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample Temperature				
Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		2.2°C
Ice Type (Blue/Wet)				Wet
All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
VOC Headspace: (No) none, If Yes (See comment)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> <6mm/Pea size?
524.2, 524.3, 524.1, 8260, 1666 P/T, LUFT				
pH verified upon receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot# 3082367
Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 508.1, 525.2<2; 6710B<2; 608.3 5-9				
Free Chlorine Tested <0.1 (Organic Analyses)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cl Test Strip Lot#
O&G pH <2 verified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		pH paper Lot#
pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>		pH Reading:
Project Manager notified about sample preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acid Lot#
				Anti added:

PM Comments

Sample Receipt Checklist Prepared by:

Signature: Jerico Bolotano

Date: 02/15/24

This page intentionally left blank.



Appendix E: SCADA System Data



Data Table 1_hourly

Timestamps	decarbonator.a_dc_fit_1001.valuescreen	decarbonator.a_decarbonator_blower1.runningstatus	decarbonator.a_decarbonator_blower2.runningstatus	nso4.a_nso4_fit_1004.valuescreen	hf.a_hf_fit_1004.valuescreen	nocl.a_nocl_pump7.vfdspeed	nocl.a_nocl_pump8.vfdspeed	naoh.a_naoh_fit_1004.valuescreen	decarbonator.a_dc_ait_1001.valuescreen
2/19/2024 20:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.82
2/19/2024 19:00	326.13	0	0	0.47	0.3	4.25	NoData	1.64	8.81
2/19/2024 18:00	411.92	NoData	NoData	0.86	0.46	9.33	NoData	2.74	8.84
2/19/2024 17:00	644.01	NoData	NoData	1.45	0.81	15.07	NoData	4.32	8.69
2/19/2024 16:00	664.91	NoData	NoData	1.67	0.83	17.64	NoData	4.77	8.65
2/19/2024 15:00	440.32	NoData	NoData	1.42	0.7	15.5	NoData	3.33	8.72
2/19/2024 14:00	310.66	1	1	NoData	NoData	NoData	NoData	NoData	8.74
2/19/2024 13:00	511.42	0.33	0.33	1.62	0.83	5.33	NoData	4.23	8.35
2/19/2024 12:00	978.91	NoData	NoData	2.03	1.13	22.38	NoData	5.95	8.25
2/19/2024 11:00	752.37	NoData	NoData	1.46	0.81	15.82	NoData	4.23	8.6
2/19/2024 10:00	586.06	NoData	NoData	1.18	0.73	14.42	NoData	3.62	8.67
2/19/2024 9:00	403.87	NoData	NoData	0.71	0.44	7.56	NoData	2.11	8.7
2/19/2024 8:00	371.14	NoData	NoData	0.71	0.42	7.5	NoData	1.94	8.72
2/19/2024 7:00	375.47	NoData	NoData	0.7	0.42	7.5	NoData	1.93	8.72
2/19/2024 6:00	375.6	NoData	NoData	0.71	0.42	7.54	NoData	1.94	8.71
2/19/2024 5:00	371.31	NoData	NoData	0.69	0.42	7.5	NoData	1.95	NoData
2/19/2024 4:00	369.57	NoData	NoData	0.68	0.42	7.5	NoData	1.95	8.72
2/19/2024 3:00	369.35	NoData	NoData	0.71	0.42	7.46	NoData	1.97	8.72
2/19/2024 2:00	370.66	NoData	NoData	0.72	0.42	7.5	NoData	1.99	8.74
2/19/2024 1:00	370.97	NoData	NoData	0.71	0.42	7.5	NoData	2.04	8.77
2/19/2024 0:00	371.45	NoData	NoData	0.75	0.42	7.5	NoData	2.03	8.76
2/18/2024 23:00	369.16	NoData	NoData	0.74	0.42	7.5	NoData	1.99	8.75
2/18/2024 22:00	377.27	NoData	NoData	0.75	0.42	7.5	NoData	2.03	8.73
2/18/2024 21:00	389.2	NoData	NoData	0.75	0.42	7.5	NoData	2.09	8.76
2/18/2024 20:00	396.37	NoData	NoData	0.75	0.42	7.5	NoData	2.06	8.75
2/18/2024 19:00	398.37	NoData	NoData	0.76	0.43	7.5	NoData	2.08	8.73
2/18/2024 18:00	410.56	NoData	NoData	0.77	0.43	7.5	NoData	2.1	8.71
2/18/2024 17:00	438.51	NoData	NoData	0.78	0.43	NoData	NoData	2.14	8.71
2/18/2024 16:00	440.94	NoData	NoData	0.78	0.43	NoData	NoData	2.15	NoData
2/18/2024 15:00	440.33	NoData	NoData	0.79	0.44	NoData	NoData	2.18	8.73
2/18/2024 14:00	459.53	NoData	NoData	0.8	0.44	NoData	NoData	2.18	8.72
2/18/2024 13:00	472.99	NoData	NoData	0.79	0.44	NoData	NoData	2.21	8.71
2/18/2024 12:00	481.78	NoData	NoData	0.81	0.45	8.47	NoData	2.26	8.72
2/18/2024 11:00	463.42	NoData	NoData	0.9	0.5	8.86	NoData	2.46	8.73
2/18/2024 10:00	415.36	NoData	NoData	0.77	0.42	7.7	NoData	2.07	8.76
2/18/2024 9:00	396.7	NoData	NoData	0.74	0.42	7.52	NoData	1.99	8.75
2/18/2024 8:00	378.22	NoData	NoData	0.71	0.4	NoData	NoData	1.89	8.75
2/18/2024 7:00	317.2	NoData	NoData	0.69	0.39	NoData	NoData	1.85	8.78
2/18/2024 6:00	258.39	0.57	0.57	0.63	0.35	6	NoData	1.82	8.87
2/18/2024 5:00	277.07	0	0	0.49	0.39	5	NoData	1.89	8.84
2/18/2024 4:00	277.87	NoData	NoData	0.71	0.41	7.5	NoData	1.98	8.85
2/18/2024 3:00	276.31	NoData	NoData	0.72	0.41	7.5	NoData	2	8.87
2/18/2024 2:00	277.44	NoData	NoData	0.72	0.41	7.5	NoData	1.98	8.87
2/18/2024 1:00	277.71	NoData	NoData	0.72	0.41	7.5	NoData	1.99	8.87
2/18/2024 0:00	277.97	NoData	NoData	0.71	0.41	7.5	NoData	2.01	8.88
2/17/2024 23:00	276.4	NoData	NoData	0.72	0.4	7.5	NoData	2.03	8.87
2/17/2024 22:00	282.82	NoData	NoData	0.72	0.4	7.5	NoData	2.04	8.89
2/17/2024 21:00	279.39	NoData	NoData	0.72	0.41	7.5	NoData	2.05	8.87
2/17/2024 20:00	277.97	NoData	NoData	0.73	0.41	NoData	NoData	2.06	8.89
2/17/2024 19:00	277.91	NoData	NoData	0.73	0.41	7.5	NoData	2.1	8.9

Data Table 1_hourly

Timestamps	decarbonator.a_dc_fit_1001.valuescreen	decarbonator.a_decarbonator_blower1.runningstatus	decarbonator.a_decarbonator_blower2.runningstatus	nso4.a_nso4_fit_1004.valuescreen	hf.a_hf_fit_1004.valuescreen	nocl.a_nocl_pump7.vfdspeed	nocl.a_nocl_pump8.vfdspeed	naoh.a_naoh_fit_1004.valuescreen	decarbonator.a_dc_ait_1001.valuescreen
2/17/2024 18:00	277.4	NoData	NoData	0.72	0.4	7.5	NoData	2.11	8.9
2/17/2024 17:00	278.29	NoData	NoData	0.72	0.4	7.5	NoData	2.12	8.88
2/17/2024 16:00	340.06	NoData	NoData	0.75	0.42	7.4	NoData	2.25	8.78
2/17/2024 15:00	667.06	NoData	NoData	1.25	0.56	14.31	NoData	3.73	8.58
2/17/2024 14:00	869.58	NoData	NoData	1.4	0.75	15.33	NoData	4.15	8.68
2/17/2024 13:00	510.22	NoData	NoData	0.94	0.45	10.89	NoData	2.68	8.71
2/17/2024 12:00	699.44	NoData	NoData	1.35	0.65	12.71	NoData	4.07	8.63
2/17/2024 11:00	555.58	NoData	NoData	1.35	0.8	15.46	NoData	4.14	8.72
2/17/2024 10:00	411.58	NoData	NoData	1.16	0.49	14.2	NoData	3.26	8.8
2/17/2024 9:00	281.12	NoData	NoData	0.61	0.36	6.31	NoData	1.69	8.82
2/17/2024 8:00	195.7	0.5	0.5	0.33	0.31	0	NoData	1.58	8.86
2/17/2024 7:00	277.71	NoData	NoData	0.71	0.4	7.5	NoData	2	8.86
2/17/2024 6:00	277.62	NoData	NoData	0.69	0.4	7.5	NoData	1.99	NoData
2/17/2024 5:00	277.36	NoData	NoData	0.72	0.41	7.5	NoData	1.99	8.85
2/17/2024 4:00	276.76	NoData	NoData	0.72	0.4	7.5	NoData	2.03	NoData
2/17/2024 3:00	277.79	NoData	NoData	0.72	0.41	7.5	NoData	2.06	8.87
2/17/2024 2:00	277.89	NoData	NoData	0.72	0.4	7.5	NoData	2.08	8.87
2/17/2024 1:00	278.72	NoData	NoData	0.72	0.41	NoData	NoData	2.07	8.88
2/17/2024 0:00	280.95	NoData	NoData	0.71	0.41	7.5	NoData	2.08	8.86
2/16/2024 23:00	277.41	NoData	NoData	0.72	0.41	7.5	NoData	2.08	8.87
2/16/2024 22:00	277.95	NoData	NoData	0.71	0.4	NoData	NoData	2.12	8.89
2/16/2024 21:00	277.83	NoData	NoData	0.7	0.4	NoData	NoData	2.11	8.88
2/16/2024 20:00	276.32	NoData	NoData	0.65	0.37	6.54	NoData	1.97	8.86
2/16/2024 19:00	482.5	NoData	NoData	1.31	0.61	12.89	NoData	3.43	8.72
2/16/2024 18:00	638.73	NoData	NoData	1.45	0.61	18.58	NoData	3.89	8.62
2/16/2024 17:00	367.15	1	1	0.61	0.41	4.4	NoData	2.14	8.56
2/16/2024 16:00	693.34	0	0	1.19	0.76	13.29	NoData	4.15	8.57
2/16/2024 15:00	740.6	NoData	NoData	1.49	0.83	15.5	NoData	4.38	8.54
2/16/2024 14:00	737.48	NoData	NoData	1.47	0.81	15.1	NoData	4.29	8.56
2/16/2024 13:00	746.9	NoData	NoData	1.5	0.83	16.07	NoData	4.46	8.52
2/16/2024 12:00	746.55	NoData	NoData	1.51	0.83	16	NoData	4.44	8.56
2/16/2024 11:00	745.2	NoData	NoData	1.51	0.84	15.5	NoData	4.46	8.55
2/16/2024 10:00	737.32	NoData	NoData	1.5	0.82	15.5	NoData	4.43	8.52
2/16/2024 9:00	740.62	NoData	NoData	1.5	0.78	15.33	NoData	4.43	8.6
2/16/2024 8:00	600.51	1	1	1.48	0.61	14.11	NoData	3.47	8.66
2/16/2024 7:00	370.11	0	0	0.61	0.41	7.06	NoData	2.07	8.75
2/16/2024 6:00	374.74	NoData	NoData	0.71	0.4	7.5	NoData	2.12	8.76
2/16/2024 5:00	502.9	NoData	NoData	1.18	0.47	8.89	NoData	3.15	8.67
2/16/2024 4:00	740.81	NoData	NoData	1.47	0.83	15.5	NoData	4.39	8.6
2/16/2024 3:00	737.77	NoData	NoData	1.48	0.83	15.5	NoData	4.37	8.6
2/16/2024 2:00	739.45	NoData	NoData	1.47	0.79	15.5	NoData	4.36	8.61
2/16/2024 1:00	744.69	NoData	NoData	1.48	0.83	15.57	NoData	4.39	8.61
2/16/2024 0:00	737.36	NoData	NoData	1.48	0.83	15.43	NoData	4.42	8.61
2/15/2024 23:00	737.02	NoData	NoData	1.49	0.83	15.5	NoData	4.4	8.6
2/15/2024 22:00	738.47	NoData	NoData	1.48	0.83	15.5	NoData	4.4	8.58
2/15/2024 21:00	741.14	NoData	NoData	1.48	0.81	15.5	NoData	4.42	8.56
2/15/2024 20:00	750.23	NoData	NoData	1.49	0.83	15.57	NoData	4.42	8.54
2/15/2024 19:00	737.64	NoData	NoData	1.49	0.83	15.44	NoData	4.41	8.57
2/15/2024 18:00	740.64	NoData	NoData	1.48	0.71	15.5	NoData	4.34	8.58
2/15/2024 17:00	498.57	1	1	1.2	0.51	9	NoData	3.24	8.55

Data Table 1_hourly

Timestamps	decarbonator.a_dc_fit_1001.valuescreen	decarbonator.a_decarbonator_blower1.runningstatus	decarbonator.a_decarbonator_blower2.runningstatus	nso4.a_nso4_fit_1004.valuescreen	hf.a_hf_fit_1004.valuescreen	nocl.a_nocl_pump7.vfdspeed	nocl.a_nocl_pump8.vfdspeed	naoh.a_naoh_fit_1004.valuescreen	decarbonator.a_dc_ait_1001.valuescreen
2/15/2024 16:00	231.16	0.5	0.5	NoData	NoData	NoData	NoData	NoData	8.47
2/15/2024 15:00	718.95	0	0	1.26	0.69	13.69	NoData	4.25	8.57
2/15/2024 14:00	746.42	NoData	NoData	1.34	0.77	15.14	NoData	4.17	8.62
2/15/2024 13:00	390.42	NoData	NoData	1.36	0.53	12.44	NoData	4.14	8.7
2/15/2024 12:00	717.39	NoData	NoData	1.83	1.08	19.25	NoData	6.82	8.52
2/15/2024 11:00	684.16	NoData	NoData	1.96	1.11	20.68	NoData	6.81	8.22
2/15/2024 10:00	804.39	NoData	NoData	2.05	1.2	22.44	NoData	6.8	8.28
2/15/2024 9:00	608.73	1	1	1.74	1.03	18.47	NoData	5.5	8.63
2/15/2024 8:00	462.53	0	0	0.93	0.53	8.43	NoData	2.94	8.68
2/15/2024 7:00	750.91	NoData	NoData	1.45	0.81	15.56	NoData	4.39	8.54
2/15/2024 6:00	740.58	NoData	NoData	1.44	0.8	15.5	NoData	4.41	8.61
2/15/2024 5:00	740.87	NoData	NoData	1.45	0.72	15.33	NoData	4.41	8.58
2/15/2024 4:00	741.07	NoData	NoData	1.44	0.69	15.5	NoData	4.38	8.6
2/15/2024 3:00	737.15	NoData	NoData	1.44	0.73	15.5	NoData	4.4	8.62
2/15/2024 2:00	737.42	NoData	NoData	1.45	0.77	15.5	NoData	4.4	8.62
2/15/2024 1:00	731.16	NoData	NoData	1.51	0.66	16	NoData	4.56	8.63
2/15/2024 0:00	705.22	NoData	NoData	1.3	0.62	10.87	NoData	3.64	8.71
2/14/2024 23:00	603.78	NoData	NoData	1.41	0.69	14.84	NoData	4.17	8.62
2/14/2024 22:00	736.29	NoData	NoData	1.44	0.75	15.5	NoData	4.38	8.59
2/14/2024 21:00	750.06	NoData	NoData	1.45	0.71	15.54	NoData	4.4	8.57
2/14/2024 20:00	737.69	NoData	NoData	1.45	0.76	15.5	NoData	4.41	8.56
2/14/2024 19:00	741.66	NoData	NoData	1.41	0.78	15.5	NoData	4.27	8.53
2/14/2024 18:00	506.71	1	1	0.93	0.55	8.15	NoData	3.07	8.72
2/14/2024 17:00	727.3	0	0	1.36	0.79	15.65	NoData	4.3	8.63
2/14/2024 16:00	418.85	0.5	0.5	0.8	0.48	9.33	NoData	2.56	8.64
2/14/2024 15:00	401.19	1	1	0.87	0.52	11	NoData	2.81	8.54
2/14/2024 14:00	741.56	0	0	1.28	0.79	12.75	NoData	4.38	8.52
2/14/2024 13:00	543.03	NoData	NoData	1.2	0.6	12.69	NoData	3.44	8.65
2/14/2024 12:00	715.21	0.5	0.5	1.73	1	19.92	NoData	5.63	8.51
2/14/2024 11:00	560.29	0.5	0.5	1.8	1.11	18.56	NoData	5.63	8.48
2/14/2024 10:00	649.07	0.5	0.5	1.07	0.72	12.58	NoData	3.46	8.57
2/14/2024 9:00	417.72	NoData	NoData	0.92	0.49	9.5	NoData	2.8	8.66
2/14/2024 8:00	538.44	0.5	0.5	0.91	0.57	8.64	NoData	3.3	8.18
2/14/2024 7:00	842.57	NoData	NoData	1.59	0.91	16.68	NoData	4.54	8.41
2/14/2024 6:00	744.26	NoData	NoData	1.45	0.83	15.55	NoData	4.34	8.45
2/14/2024 5:00	741.7	NoData	NoData	1.45	0.83	15.47	NoData	4.34	8.44
2/14/2024 4:00	741.01	NoData	NoData	1.44	0.83	15.5	NoData	4.33	8.45
2/14/2024 3:00	738.13	NoData	NoData	1.44	0.83	15.5	NoData	4.34	8.46
2/14/2024 2:00	746.87	NoData	NoData	1.44	0.83	15.53	NoData	4.34	8.47
2/14/2024 1:00	742.32	NoData	NoData	1.45	0.83	15.45	NoData	4.33	8.46
2/14/2024 0:00	738.4	NoData	NoData	1.45	0.83	15.5	NoData	4.35	8.46
2/13/2024 23:00	741.29	NoData	NoData	1.44	0.83	15.5	NoData	4.34	8.46
2/13/2024 22:00	737.95	NoData	NoData	1.45	0.83	15.5	NoData	4.34	8.45
2/13/2024 21:00	739.69	NoData	NoData	1.45	0.83	15.5	NoData	4.32	8.45
2/13/2024 20:00	745.63	NoData	NoData	1.45	0.83	15.53	NoData	4.32	8.44
2/13/2024 19:00	740.95	NoData	NoData	1.46	0.83	15.4	NoData	4.33	8.45
2/13/2024 18:00	737.98	NoData	NoData	1.46	0.83	15.5	NoData	4.34	8.44
2/13/2024 17:00	730.66	NoData	NoData	1.46	0.83	15.5	NoData	4.34	8.45
2/13/2024 16:00	748.02	NoData	NoData	1.45	0.83	15.5	NoData	4.35	8.43
2/13/2024 15:00	741.44	NoData	NoData	1.47	0.83	15.53	NoData	4.39	8.45

Data Table 1_hourly

Timestamps	decarbonator.a_dc_fit_1001.valuescreen	decarbonator.a_decarbonator_blower1.runningstatus	decarbonator.a_decarbonator_blower2.runningstatus	nso4.a_nso4_fit_1004.valuescreen	hf.a_hf_fit_1004.valuescreen	nocl.a_nocl_pump7.vfdspeed	nocl.a_nocl_pump8.vfdspeed	naoh.a_naoh_fit_1004.valuescreen	decarbonator.a_dc_ait_1001.valuescreen
2/13/2024 14:00	737.9	NoData	NoData	1.47	0.83	15.44	NoData	4.37	8.44
2/13/2024 13:00	741.17	NoData	NoData	1.46	0.83	15.5	NoData	4.35	8.43
2/13/2024 12:00	741.33	NoData	NoData	1.46	0.83	15.5	NoData	4.38	8.42
2/13/2024 11:00	741.24	NoData	NoData	1.45	0.83	15.5	NoData	4.39	8.41
2/13/2024 10:00	743.93	NoData	NoData	1.45	0.83	15.5	NoData	4.42	8.44
2/13/2024 9:00	742.23	NoData	NoData	1.53	0.88	17.1	NoData	4.64	8.52
2/13/2024 8:00	476.94	NoData	NoData	0.73	0.44	8	NoData	2.06	8.77
2/13/2024 7:00	430.1	NoData	NoData	1.05	0.66	10.27	NoData	3.03	8.67
2/13/2024 6:00	739.84	NoData	NoData	1.45	0.83	15.5	NoData	4.43	8.61
2/13/2024 5:00	747.58	NoData	NoData	1.45	0.83	15.53	NoData	4.42	8.58
2/13/2024 4:00	737.56	NoData	NoData	1.45	0.83	15.45	NoData	3.98	8.64
2/13/2024 3:00	740.51	NoData	NoData	1.45	0.83	15.5	NoData	2.44	8.67
2/13/2024 2:00	740.72	NoData	NoData	1.45	0.83	15.5	NoData	4.11	8.96
2/13/2024 1:00	745.83	NoData	NoData	1.45	0.83	15.5	NoData	4.35	8.48
2/13/2024 0:00	741.99	NoData	NoData	1.45	0.83	15.65	NoData	4.27	7.82
2/12/2024 23:00	741.08	NoData	NoData	1.45	0.83	15.38	NoData	0.87	8.08
2/12/2024 22:00	737.55	NoData	NoData	1.42	0.77	15.56	NoData	2.54	8.21
2/12/2024 21:00	707.32	NoData	NoData	1.37	0.77	16.19	NoData	4.35	8.57
2/12/2024 20:00	350.95	1	1	0.44	0.29	4.5	NoData	1.58	8.64
2/12/2024 19:00	691.11	0	0	1.27	0.8	13.27	NoData	4.23	8.51
2/12/2024 18:00	740.7	NoData	NoData	1.46	0.83	15.5	NoData	4.36	8.52
2/12/2024 17:00	737.38	NoData	NoData	1.49	0.72	15.86	NoData	4.46	8.47
2/12/2024 16:00	581.54	NoData	NoData	1.38	0.86	14.79	NoData	4.31	8.48
2/12/2024 15:00	675.48	0.5	0.5	1.18	0.77	9.75	NoData	2.81	8.01
2/12/2024 14:00	913.29	NoData	NoData	1.55	0.86	16.5	NoData	4.48	8.4
2/12/2024 13:00	925.67	NoData	NoData	1.63	0.86	17.45	NoData	4.48	8.4
2/12/2024 12:00	934.65	NoData	NoData	1.62	0.86	17.57	NoData	4.45	8.38
2/12/2024 11:00	741.02	NoData	NoData	1.53	0.74	17.27	NoData	4.23	8.55
2/12/2024 10:00	561.68	NoData	NoData	1.39	0.77	15.4	NoData	3.99	8.72
2/12/2024 9:00	315.55	NoData	NoData	0.85	0.49	9.23	NoData	2.17	8.89
2/12/2024 8:00	527.23	NoData	NoData	1.52	0.79	15.75	NoData	4.21	8.84
2/12/2024 7:00	178.96	NoData	NoData	1.97	1.08	21.9	NoData	5.87	8.99
2/12/2024 6:00	NoData	1	1	NoData	NoData	NoData	NoData	NoData	8.83
2/12/2024 5:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.83
2/12/2024 3:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 2:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.87
2/12/2024 1:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 0:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 23:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.89
2/11/2024 22:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 21:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 20:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 19:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 18:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.86
2/11/2024 17:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 16:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.85
2/11/2024 15:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 14:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 13:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Data Table 1_hourly

Timestamps	decarbonator.a_dc_fit_1001.valuescreen	decarbonator.a_decarbonator_blower1.runningstatus	decarbonator.a_decarbonator_blower2.runningstatus	nso4.a_nso4_fit_1004.valuescreen	hf.a_hf_fit_1004.valuescreen	nocl.a_nocl_pump7.vfdspeed	nocl.a_nocl_pump8.vfdspeed	naoh.a_naoh_fit_1004.valuescreen	decarbonator.a_dc_ait_1001.valuescreen
2/11/2024 12:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 11:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.98
2/11/2024 10:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 9:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 8:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	9
2/11/2024 7:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 6:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 5:00	6.39	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.98
2/11/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.98
2/11/2024 3:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 2:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 1:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.91
2/11/2024 0:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/10/2024 23:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/10/2024 22:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	8.9

Data Table 1_hourly

Timestamps	decarbonator.a_dc_ait_1002.val uescreen	decarbonator.a_dc_ait_1003.val uescreen	a_dc_ait_1003a. outputs.value	a_dc_ait_1003b. outputs.value	decarbonator.a_dc_ait_1004.val uescreen	decarbonator.a_dc_ait_1005.val uescreen	decarbonator.a_dc_ait_1007.val uescreen
2/19/2024 20:00	0.97	0.65	NoData	NoData	NoData	357.36	71.29
2/19/2024 19:00	0.84	3.19	NoData	NoData	NoData	375.11	71.57
2/19/2024 18:00	0.91	3.93	NoData	NoData	NoData	353.23	71.69
2/19/2024 17:00	0.84	3.97	NoData	NoData	NoData	354.11	71.78
2/19/2024 16:00	0.8	3.71	NoData	NoData	NoData	393.92	71.77
2/19/2024 15:00	0.73	3.05	NoData	NoData	NoData	407.66	71.69
2/19/2024 14:00	1.13	0.45	NoData	NoData	NoData	370.07	71.77
2/19/2024 13:00	1.13	2.85	NoData	NoData	NoData	382.03	71.85
2/19/2024 12:00	0.8	3.93	NoData	NoData	NoData	393.97	NoData
2/19/2024 11:00	0.8	3.67	NoData	NoData	NoData	394.65	71.74
2/19/2024 10:00	0.81	3.55	NoData	NoData	NoData	387.2	71.78
2/19/2024 9:00	0.81	3.53	NoData	NoData	NoData	396.25	71.76
2/19/2024 8:00	0.84	3.52	NoData	NoData	NoData	392.1	71.73
2/19/2024 7:00	0.84	3.55	NoData	NoData	NoData	390.34	71.83
2/19/2024 6:00	0.83	3.58	NoData	NoData	NoData	392.91	71.82
2/19/2024 5:00	0.82	3.58	NoData	NoData	NoData	394.29	71.83
2/19/2024 4:00	0.85	3.59	NoData	NoData	NoData	390.47	71.84
2/19/2024 3:00	0.84	3.59	NoData	NoData	NoData	387.22	71.95
2/19/2024 2:00	0.84	3.59	NoData	NoData	NoData	388.68	72.07
2/19/2024 1:00	0.84	3.53	NoData	NoData	NoData	388.42	72.11
2/19/2024 0:00	0.85	3.72	NoData	NoData	NoData	390.6	72.09
2/18/2024 23:00	0.84	3.7	NoData	NoData	NoData	388.95	72.08
2/18/2024 22:00	0.84	3.72	NoData	NoData	NoData	395.77	71.97
2/18/2024 21:00	0.85	3.72	NoData	NoData	NoData	394.37	72.09
2/18/2024 20:00	0.84	3.75	NoData	NoData	NoData	394.34	72.16
2/18/2024 19:00	0.85	3.76	NoData	NoData	NoData	398.17	72.18
2/18/2024 18:00	0.83	3.81	NoData	NoData	NoData	398.09	72.12
2/18/2024 17:00	0.86	3.87	NoData	NoData	NoData	403.76	72.19
2/18/2024 16:00	0.85	3.89	NoData	NoData	NoData	397.1	72.19
2/18/2024 15:00	0.85	3.9	NoData	NoData	NoData	396.92	72.35
2/18/2024 14:00	0.85	3.86	NoData	NoData	NoData	392.78	72.4
2/18/2024 13:00	0.84	3.87	NoData	NoData	NoData	397.93	72.35
2/18/2024 12:00	0.85	3.9	NoData	NoData	NoData	393.95	72.39
2/18/2024 11:00	0.86	3.88	NoData	NoData	NoData	383.39	72.27
2/18/2024 10:00	0.84	3.85	NoData	NoData	NoData	362.08	72.14
2/18/2024 9:00	0.84	3.86	NoData	NoData	NoData	356.57	72.03
2/18/2024 8:00	0.83	3.85	NoData	NoData	NoData	355.93	71.83
2/18/2024 7:00	0.92	2.88	NoData	NoData	NoData	317.63	71.72
2/18/2024 6:00	1.01	0.61	NoData	NoData	NoData	287.18	71.82
2/18/2024 5:00	0.91	3.35	NoData	NoData	NoData	296.06	71.88
2/18/2024 4:00	0.84	3.79	NoData	NoData	NoData	299.1	71.91
2/18/2024 3:00	0.83	3.83	NoData	NoData	NoData	296.93	71.87
2/18/2024 2:00	0.84	3.85	NoData	NoData	NoData	294.3	71.89
2/18/2024 1:00	0.84	3.86	NoData	NoData	NoData	293.75	71.9
2/18/2024 0:00	0.84	3.81	NoData	NoData	NoData	293.65	71.93
2/17/2024 23:00	0.84	3.79	NoData	NoData	NoData	294.25	71.99
2/17/2024 22:00	0.84	3.8	NoData	NoData	NoData	296.48	71.99
2/17/2024 21:00	0.85	3.79	NoData	NoData	NoData	297.88	71.96
2/17/2024 20:00	0.83	3.78	NoData	NoData	NoData	295.3	72
2/17/2024 19:00	0.85	3.78	NoData	NoData	NoData	295.81	72.01

Data Table 1_hourly

Timestamps	decarbonator.a_dc_ait_1002.val uescreen	decarbonator.a_dc_ait_1003.val uescreen	a_dc_ait_1003a. outputs.value	a_dc_ait_1003b. outputs.value	decarbonator.a_dc_ait_1004.val uescreen	decarbonator.a_dc_ait_1005.val uescreen	decarbonator.a_dc_ait_1007.val uescreen
2/17/2024 18:00	0.85	3.76	NoData	NoData	NoData	299.76	72.07
2/17/2024 17:00	0.84	3.74	NoData	NoData	NoData	311.27	72.08
2/17/2024 16:00	0.85	3.82	NoData	NoData	NoData	392.74	72.08
2/17/2024 15:00	0.85	3.94	NoData	NoData	NoData	393.71	72.3
2/17/2024 14:00	0.82	3.66	NoData	NoData	NoData	388.14	72.26
2/17/2024 13:00	0.86	3.69	NoData	NoData	NoData	353.44	72.23
2/17/2024 12:00	0.83	3.8	NoData	NoData	NoData	323.5	72.22
2/17/2024 11:00	0.84	3.87	NoData	NoData	NoData	286.49	72.15
2/17/2024 10:00	0.81	3.83	NoData	NoData	NoData	290.7	72.02
2/17/2024 9:00	0.88	2.36	NoData	NoData	NoData	298.66	71.95
2/17/2024 8:00	0.93	1.1	NoData	NoData	NoData	287.79	72
2/17/2024 7:00	0.84	3.79	NoData	NoData	NoData	297.48	72
2/17/2024 6:00	0.85	3.75	NoData	NoData	NoData	299.9	71.98
2/17/2024 5:00	0.84	3.75	NoData	NoData	NoData	301.14	71.94
2/17/2024 4:00	0.84	3.76	NoData	NoData	NoData	301.57	71.94
2/17/2024 3:00	0.85	3.8	NoData	NoData	NoData	300.5	72.02
2/17/2024 2:00	0.85	3.82	NoData	NoData	NoData	298.16	72.04
2/17/2024 1:00	0.84	3.86	NoData	NoData	NoData	297.88	72.06
2/17/2024 0:00	0.85	3.89	NoData	NoData	NoData	298.19	72.08
2/16/2024 23:00	0.84	3.9	NoData	NoData	NoData	298.83	72.12
2/16/2024 22:00	0.85	3.93	NoData	NoData	NoData	300.06	72.14
2/16/2024 21:00	0.84	3.86	NoData	NoData	NoData	304.82	72.19
2/16/2024 20:00	0.83	3.82	NoData	NoData	NoData	330.11	72.19
2/16/2024 19:00	0.91	4.04	NoData	NoData	NoData	365.83	72.24
2/16/2024 18:00	0.8	3.77	NoData	NoData	NoData	388.21	72.14
2/16/2024 17:00	0.76	3.38	NoData	NoData	NoData	369.98	72.2
2/16/2024 16:00	0.84	3.99	NoData	NoData	NoData	365.97	72.29
2/16/2024 15:00	0.83	4.05	NoData	NoData	NoData	359.62	72.32
2/16/2024 14:00	0.84	4.04	NoData	NoData	NoData	363.1	72.37
2/16/2024 13:00	0.83	3.96	NoData	NoData	NoData	351.65	72.39
2/16/2024 12:00	0.83	3.88	NoData	NoData	NoData	361.43	72.36
2/16/2024 11:00	0.82	3.84	NoData	NoData	NoData	378.8	72.32
2/16/2024 10:00	0.82	3.77	NoData	NoData	NoData	380.54	72.12
2/16/2024 9:00	0.83	4	NoData	NoData	NoData	370.84	72.02
2/16/2024 8:00	0.81	0.88	NoData	NoData	NoData	355.34	71.87
2/16/2024 7:00	0.86	3.37	NoData	NoData	NoData	364.79	71.76
2/16/2024 6:00	0.85	3.82	NoData	NoData	NoData	379.91	71.86
2/16/2024 5:00	0.89	3.88	NoData	NoData	NoData	370.3	71.99
2/16/2024 4:00	0.83	3.94	NoData	NoData	NoData	370.39	71.96
2/16/2024 3:00	0.83	3.89	NoData	NoData	NoData	371.46	71.95
2/16/2024 2:00	0.83	3.82	NoData	NoData	NoData	370.15	72.03
2/16/2024 1:00	0.83	3.91	NoData	NoData	NoData	369.95	72.03
2/16/2024 0:00	0.82	3.96	NoData	NoData	NoData	373.11	72.06
2/15/2024 23:00	0.83	3.95	NoData	NoData	NoData	373.11	72.07
2/15/2024 22:00	0.83	3.89	NoData	NoData	NoData	379.43	72.16
2/15/2024 21:00	0.83	3.9	NoData	NoData	NoData	378.62	72.14
2/15/2024 20:00	0.83	3.93	NoData	NoData	NoData	374.23	72.11
2/15/2024 19:00	0.83	3.92	NoData	NoData	NoData	365.72	72.05
2/15/2024 18:00	0.83	3.87	NoData	NoData	NoData	365.63	71.84
2/15/2024 17:00	0.74	3.15	NoData	NoData	NoData	371.42	71.8

Data Table 1_hourly

Timestamps	decarbonator.a_dc_ait_1002.val uescreen	decarbonator.a_dc_ait_1003.val uescreen	a_dc_ait_1003a. outputs.value	a_dc_ait_1003b. outputs.value	decarbonator.a_dc_ait_1004.val uescreen	decarbonator.a_dc_ait_1005.val uescreen	decarbonator.a_dc_ait_1007.val uescreen
2/15/2024 16:00	NoData	3.53	NoData	NoData	NoData	361.99	71.94
2/15/2024 15:00	0.82	3.8	NoData	NoData	NoData	358.41	72.09
2/15/2024 14:00	0.82	3.68	NoData	NoData	NoData	356.88	72.1
2/15/2024 13:00	0.9	3.69	NoData	NoData	NoData	289.21	72.01
2/15/2024 12:00	0.85	3.84	NoData	NoData	NoData	289.24	72.06
2/15/2024 11:00	0.84	3.91	NoData	NoData	NoData	288.25	72.16
2/15/2024 10:00	0.82	4.04	NoData	NoData	NoData	321.12	71.98
2/15/2024 9:00	0.75	2.8	NoData	NoData	NoData	370.86	71.83
2/15/2024 8:00	0.87	3.78	NoData	NoData	NoData	373.81	71.47
2/15/2024 7:00	0.82	3.9	NoData	NoData	NoData	376.38	71.34
2/15/2024 6:00	0.83	3.86	NoData	NoData	NoData	381.1	71.35
2/15/2024 5:00	0.83	3.89	NoData	NoData	NoData	381.77	71.37
2/15/2024 4:00	0.83	3.89	NoData	NoData	NoData	378.64	71.4
2/15/2024 3:00	0.84	3.89	NoData	NoData	NoData	374.76	71.41
2/15/2024 2:00	0.83	3.89	NoData	NoData	NoData	372.49	71.47
2/15/2024 1:00	0.83	3.82	NoData	NoData	NoData	374.25	71.54
2/15/2024 0:00	0.84	3.58	NoData	NoData	NoData	387.05	71.56
2/14/2024 23:00	0.85	3.82	NoData	NoData	NoData	381.37	71.82
2/14/2024 22:00	0.83	3.73	NoData	NoData	NoData	388.31	71.96
2/14/2024 21:00	0.83	3.75	NoData	NoData	NoData	387.23	71.99
2/14/2024 20:00	0.83	3.64	NoData	NoData	NoData	389.4	71.97
2/14/2024 19:00	0.83	3.68	0.12	NoData	0.23	387.32	71.97
2/14/2024 18:00	0.93	2.95	0.12	0.16	NoData	372.31	71.9
2/14/2024 17:00	0.84	3.39	0.89	0.46	NoData	376.16	71.95
2/14/2024 16:00	0.82	3.15	0.81	0.13	NoData	389.94	72.03
2/14/2024 15:00	0.97	2.18	NoData	NoData	NoData	361.04	72.2
2/14/2024 14:00	0.87	3.43	NoData	NoData	NoData	371.68	72.27
2/14/2024 13:00	0.79	3.2	NoData	NoData	NoData	377.1	72.18
2/14/2024 12:00	0.84	3.23	NoData	NoData	NoData	375.18	72.18
2/14/2024 11:00	0.72	2.01	NoData	NoData	NoData	382.81	72
2/14/2024 10:00	1.1	3.28	NoData	NoData	NoData	384.61	71.93
2/14/2024 9:00	0.84	3.41	NoData	NoData	NoData	388.53	71.84
2/14/2024 8:00	0.89	3.3	NoData	NoData	NoData	377.03	71.81
2/14/2024 7:00	0.81	3.74	NoData	NoData	NoData	384.97	71.78
2/14/2024 6:00	0.84	3.86	NoData	NoData	NoData	373.32	71.79
2/14/2024 5:00	0.84	3.84	NoData	NoData	NoData	367.45	71.78
2/14/2024 4:00	0.84	3.79	NoData	NoData	NoData	370	71.65
2/14/2024 3:00	0.84	3.77	NoData	NoData	NoData	371.74	71.55
2/14/2024 2:00	0.84	3.75	NoData	NoData	NoData	373.78	71.58
2/14/2024 1:00	0.84	3.7	NoData	NoData	NoData	377.96	71.51
2/14/2024 0:00	0.84	3.7	NoData	NoData	NoData	378.21	71.4
2/13/2024 23:00	0.84	3.74	NoData	NoData	NoData	377.84	71.43
2/13/2024 22:00	0.84	3.79	NoData	NoData	NoData	377.7	71.56
2/13/2024 21:00	0.84	3.81	NoData	NoData	NoData	373.98	71.72
2/13/2024 20:00	0.84	3.83	NoData	NoData	NoData	365.97	71.87
2/13/2024 19:00	0.83	3.8	NoData	NoData	NoData	371.73	71.96
2/13/2024 18:00	0.84	3.75	NoData	NoData	NoData	376.83	72.06
2/13/2024 17:00	0.84	3.72	NoData	NoData	NoData	378.07	72.1
2/13/2024 16:00	0.84	3.75	NoData	NoData	NoData	380.32	NoData
2/13/2024 15:00	0.84	3.81	NoData	NoData	NoData	377.56	72.22

Data Table 1_hourly

Timestamps	decarbonator.a_dc_ait_1002.val uescreen	decarbonator.a_dc_ait_1003.val uescreen	a_dc_ait_1003a. outputs.value	a_dc_ait_1003b. outputs.value	decarbonator.a_dc_ait_1004.val uescreen	decarbonator.a_dc_ait_1005.val uescreen	decarbonator.a_dc_ait_1007.val uescreen
2/13/2024 14:00	0.84	3.82	NoData	NoData	NoData	373.83	NoData
2/13/2024 13:00	0.83	3.8	NoData	NoData	NoData	386.68	72.26
2/13/2024 12:00	0.85	3.85	NoData	NoData	NoData	385.79	72.22
2/13/2024 11:00	0.84	3.94	NoData	NoData	NoData	383.97	72.06
2/13/2024 10:00	0.84	3.9	NoData	NoData	NoData	385.52	71.87
2/13/2024 9:00	0.8	3.71	NoData	NoData	NoData	380.15	71.61
2/13/2024 8:00	0.89	3.41	NoData	NoData	NoData	399.92	71.21
2/13/2024 7:00	0.89	3.7	NoData	NoData	NoData	374.7	70.92
2/13/2024 6:00	0.83	3.63	NoData	NoData	NoData	376.43	70.95
2/13/2024 5:00	0.83	3.39	NoData	NoData	NoData	376.78	70.97
2/13/2024 4:00	0.88	3.48	NoData	NoData	NoData	378.55	71.02
2/13/2024 3:00	0.8	3.46	NoData	NoData	NoData	364.34	71.16
2/13/2024 2:00	0.84	3.39	NoData	NoData	NoData	365.08	71.39
2/13/2024 1:00	0.84	3.42	NoData	NoData	NoData	370.23	71.44
2/13/2024 0:00	0.86	3.51	NoData	NoData	NoData	368.69	71.5
2/12/2024 23:00	0.86	3.72	NoData	NoData	NoData	364.64	71.61
2/12/2024 22:00	0.81	3.8	NoData	NoData	NoData	375.9	71.69
2/12/2024 21:00	0.89	2.68	NoData	NoData	NoData	379.7	71.61
2/12/2024 20:00	0.99	1.67	NoData	NoData	NoData	351.52	71.78
2/12/2024 19:00	0.84	3.94	NoData	NoData	NoData	363.43	71.98
2/12/2024 18:00	0.84	3.63	NoData	NoData	NoData	367.9	72.04
2/12/2024 17:00	0.84	3.76	NoData	NoData	NoData	373.13	71.93
2/12/2024 16:00	0.91	3.18	NoData	NoData	NoData	388.75	71.98
2/12/2024 15:00	0.96	3.99	NoData	NoData	NoData	401.02	72.19
2/12/2024 14:00	0.84	4.02	NoData	NoData	NoData	431.59	72.18
2/12/2024 13:00	0.84	4.47	NoData	NoData	NoData	414.19	72.06
2/12/2024 12:00	0.83	4.46	NoData	NoData	NoData	384.01	NoData
2/12/2024 11:00	0.81	4.56	NoData	NoData	NoData	309.03	71.77
2/12/2024 10:00	0.74	4.16	NoData	NoData	NoData	283.59	71.49
2/12/2024 9:00	0.93	4.16	NoData	NoData	NoData	276.47	71.37
2/12/2024 8:00	0.86	4.1	NoData	NoData	NoData	239.54	71.31
2/12/2024 7:00	0.7	2.32	NoData	NoData	0.23	220.23	70.98
2/12/2024 6:00	1.09	0.41	NoData	NoData	0.25	265.58	70.67
2/12/2024 5:00	NoData	0.4	NoData	NoData	NoData	264.91	70.69
2/12/2024 4:00	NoData	0.42	NoData	NoData	NoData	264.77	70.69
2/12/2024 3:00	NoData	0.42	NoData	NoData	NoData	264.56	70.77
2/12/2024 2:00	1.13	0.41	NoData	NoData	NoData	264.77	70.81
2/12/2024 1:00	NoData	0.4	NoData	NoData	NoData	265.16	70.76
2/12/2024 0:00	NoData	0.42	NoData	NoData	NoData	265.17	70.75
2/11/2024 23:00	NoData	0.43	NoData	NoData	NoData	264.83	70.86
2/11/2024 22:00	NoData	0.42	NoData	NoData	NoData	264.45	70.97
2/11/2024 21:00	NoData	0.42	NoData	NoData	NoData	264.16	71.07
2/11/2024 20:00	NoData	0.43	NoData	NoData	NoData	263.79	71.09
2/11/2024 19:00	1.16	0.44	NoData	NoData	NoData	263.24	71.15
2/11/2024 18:00	NoData	0.45	NoData	NoData	NoData	262.68	71.21
2/11/2024 17:00	NoData	0.43	NoData	NoData	NoData	262.26	71.29
2/11/2024 16:00	NoData	0.38	NoData	NoData	NoData	262.18	71.41
2/11/2024 15:00	NoData	0.37	NoData	NoData	NoData	262.32	NoData
2/11/2024 14:00	NoData	0.37	NoData	NoData	NoData	263.02	71.67
2/11/2024 13:00	NoData	0.35	NoData	NoData	NoData	263.94	71.79

Data Table 1_hourly

Timestamps	decarbonator.a_dc_ait_1002.val uescreen	decarbonator.a_dc_ait_1003.val uescreen	a_dc_ait_1003a. outputs.value	a_dc_ait_1003b. outputs.value	decarbonator.a_dc_ait_1004.val uescreen	decarbonator.a_dc_ait_1005.val uescreen	decarbonator.a_dc_ait_1007.val uescreen
2/11/2024 12:00	NoData	0.35	NoData	NoData	NoData	264.62	71.81
2/11/2024 11:00	1.22	0.34	NoData	NoData	NoData	265.13	71.43
2/11/2024 10:00	NoData	0.34	NoData	NoData	NoData	264.58	NoData
2/11/2024 9:00	NoData	0.37	NoData	NoData	NoData	264.43	71.07
2/11/2024 8:00	1.17	0.41	NoData	NoData	NoData	264.25	70.95
2/11/2024 7:00	1.13	0.46	NoData	NoData	NoData	263.93	70.91
2/11/2024 6:00	NoData	0.53	NoData	NoData	NoData	263.52	70.89
2/11/2024 5:00	NoData	0.58	NoData	NoData	NoData	262.85	70.92
2/11/2024 4:00	NoData	0.66	NoData	NoData	NoData	261.98	71.01
2/11/2024 3:00	NoData	0.71	NoData	NoData	NoData	261.09	71.1
2/11/2024 2:00	1.05	0.75	NoData	NoData	NoData	260.33	71.17
2/11/2024 1:00	NoData	0.77	NoData	NoData	NoData	259.83	71.24
2/11/2024 0:00	NoData	0.77	NoData	NoData	NoData	259.57	71.31
2/10/2024 23:00	NoData	0.78	NoData	NoData	NoData	259.29	71.38
2/10/2024 22:00	NoData	0.78	NoData	NoData	NoData	259.19	71.41

Data Table 2_hourly

Timestamps	ro ait 2101 ec.output_v alue	ro ait 2102 ec.output_v alue	ro ait 2103 ec.output_v alue	ro ait 2104 ec.output_v alue	ro ait 2109 ec.output_v alue	ro fit 2100.output _value	ro fit 2102.output _value	ro fit 2103.output _value	ro fit 2104.output _value	ro fit 2105.output _value	ro ait 2101 ph.output_v alue
2/19/2024 20:00	28.73	25.2	32.32	21.35	5680.04	-0.69	-0.05	0.03	-0.1	-0.01	6.77
2/19/2024 19:00	28.71	25.18	32.7	21.34	5696.08	-0.68	-0.05	0.04	-0.09	-0.01	7.12
2/19/2024 18:00	28.92	25.17	33.63	21.44	5687.82	2.32	0.11	0.19	1.5	0.98	6.67
2/19/2024 17:00	57.57	43.12	34.29	24.4	5693.54	1357.59	380.9	231.39	218.66	361.25	6.67
2/19/2024 16:00	45.05	38.13	38.78	24.58	5711.65	1643.58	455.4	277.64	211.12	353.84	6.67
2/19/2024 15:00	52.43	39.76	39.64	26.47	5718.15	880.66	194.73	115.6	143.44	192.57	6.68
2/19/2024 14:00	46.97	41.09	42.15	38.58	5722.73	563.5	8.26	7.48	37.83	28.74	6.7
2/19/2024 13:00	37.91	32.86	42.23	27.86	5806.25	780.1	84.13	54.72	49.42	57.3	6.68
2/19/2024 12:00	42.08	36.62	42.43	25.38	6379.01	1645.18	457.01	279.64	209.89	354.17	6.66
2/19/2024 11:00	46.72	44.69	41.23	40.34	6393.21	1162.54	283.78	171.14	139.55	232.83	6.66
2/19/2024 10:00	28.63	25.71	41.55	22.1	6409.41	32.83	6.01	3.43	3.46	3.69	6.66
2/19/2024 9:00	57.99	46.13	42.64	26.42	6432.58	1282.97	354.25	221.58	236.99	348.37	6.66
2/19/2024 8:00	44.54	38.29	42.41	25.29	6441.91	1644.52	460.08	277.23	210.37	354.57	6.66
2/19/2024 7:00	43.98	35.74	42.19	25.19	6453.86	1675.58	466.94	283.34	201.52	359.41	6.66
2/19/2024 6:00	40.93	36.11	41.81	25.14	6461.11	1679.16	471.08	282.66	198.72	360	6.65
2/19/2024 5:00	56.58	44.4	41.67	25.6	6467.26	1643.99	456.59	280.62	210.6	354.73	6.65
2/19/2024 4:00	47.43	40.21	41.59	25.64	6473.64	1645.42	456.06	277.98	210.38	354.59	6.65
2/19/2024 3:00	44.7	37.02	41.51	25.64	6472.79	1647.6	455.38	278.59	210.56	353.54	6.64
2/19/2024 2:00	43.32	37	41.4	25.78	6472.28	1643.88	455.92	279.83	210.23	354.63	6.64
2/19/2024 1:00	41.74	36.89	41.28	25.84	6466.79	1644.72	458.24	279.11	210.92	354.22	6.63
2/19/2024 0:00	43.67	37.98	41.1	25.87	6451.31	1643.96	456.29	278.12	210.68	353.62	6.63
2/18/2024 23:00	45.81	38.83	40.92	25.89	6426.46	1644.1	456.43	276.84	210.37	354.26	6.63
2/18/2024 22:00	44.57	36.67	40.75	25.68	6421.79	1644.04	456.84	278.72	210.74	353.71	6.63
2/18/2024 21:00	42.19	37.26	40.56	25.8	6448.83	1644.6	458.05	278.46	210.03	353.68	6.62
2/18/2024 20:00	41.31	36.35	40.38	25.6	6413.73	1690.15	475.15	283.03	196.36	366.78	6.63
2/18/2024 19:00	55.61	45.19	40.14	25.45	6389.82	1664.88	467.24	279.64	203.95	352.71	6.63
2/18/2024 18:00	44.86	36.6	40.04	25.71	6353.91	1644.83	457.39	278.86	210.58	353.33	6.63
2/18/2024 17:00	42.09	36.62	40.03	25.66	6314.78	1645.05	456.14	278.45	210.23	354.63	6.64
2/18/2024 16:00	40.61	36.14	39.92	25.76	6321.41	1643.22	458.33	277.6	210.38	354.17	6.64
2/18/2024 15:00	51.59	42.3	39.81	25.86	6336.58	1643.35	456.32	277.67	210.96	354.33	6.65
2/18/2024 14:00	50.1	40.89	40.14	25.91	6349.19	1642.6	455.38	278.15	210.45	354.01	6.66
2/18/2024 13:00	41.94	35.85	39.8	25.79	6357.06	1643.01	457.76	278.01	210.76	353.81	6.67
2/18/2024 12:00	40.28	36.12	39.02	25.87	6375.9	1642.63	455.02	277.43	211.01	353.78	6.7
2/18/2024 11:00	43.47	37.44	38.67	25.82	6372.89	1643.5	457.62	277.06	210.6	355.08	6.74
2/18/2024 10:00	56.96	45.47	38.78	25.73	6388.8	1644.94	458.52	277.47	210.42	354.5	6.8
2/18/2024 9:00	38.76	35.7	39.5	25.37	6422.54	1708.98	481.3	281.7	190.56	365.2	6.77
2/18/2024 8:00	41.76	36.46	38.88	25.68	6460.37	1644	458.73	276.27	210.04	355.36	6.68
2/18/2024 7:00	54.67	43.96	32.59	25.67	6445.21	1643.44	457.46	279.12	210.42	355.03	6.68
2/18/2024 6:00	36.51	34.45	30.43	24.76	6698.03	918.7	210.04	119.81	102.76	137.06	6.87
2/18/2024 5:00	23.16	28.88	30.54	20.47	6742.55	-0.69	-0.06	0.03	32.43	-0.07	6.98
2/18/2024 4:00	23.03	27.17	30.52	20.44	6754.02	-0.7	-0.06	0.03	31.74	-0.07	6.98
2/18/2024 3:00	23.05	25.73	30.53	20.42	6761.74	-0.69	-0.06	0.03	31.38	-0.07	6.92
2/18/2024 2:00	23.08	24.79	30.52	20.39	6773.7	-0.69	-0.06	0.03	30.64	-0.07	6.94
2/18/2024 1:00	23.07	24.14	30.53	20.36	6783.91	-0.69	-0.06	0.03	29.51	-0.07	6.84
2/18/2024 0:00	23.06	23.39	30.53	20.35	6797.43	-0.69	-0.05	0.03	12.41	-0.07	6.91
2/17/2024 23:00	22.89	23.43	30.53	20.33	6813.14	-0.69	-0.06	0.03	-0.09	-0.06	6.82
2/17/2024 22:00	22.28	23.65	30.51	20.33	6827.46	-0.69	-0.06	0.03	-0.09	-0.06	6.94
2/17/2024 21:00	22.09	23.38	30.51	20.32	6838.83	-0.69	-0.05	0.03	-0.09	-0.06	6.76
2/17/2024 20:00	22.7	22.49	30.53	20.32	6854	-0.69	-0.05	0.04	-0.09	-0.06	6.81
2/17/2024 19:00	23.24	23.12	30.55	20.35	6868.85	-0.68	-0.05	0.04	-0.09	-0.06	6.78
2/17/2024 18:00	23.89	24.24	30.58	21.29	6888.96	-0.66	-0.05	0.38	-0.09	-0.06	6.71

Data Table 2_hourly

Timestamps	ro ait 2101 ec.output_v alue	ro ait 2102 ec.output_v alue	ro ait 2103 ec.output_v alue	ro ait 2104 ec.output_v alue	ro ait 2109 ec.output_v alue	ro fit 2100.output _value	ro fit 2102.output _value	ro fit 2103.output _value	ro fit 2104.output _value	ro fit 2105.output _value	ro ait 2101 ph.output_v alue
2/17/2024 17:00	25.24	24.31	30.59	20.95	6911.96	-0.65	-0.05	0.04	-0.09	-0.06	6.78
2/17/2024 16:00	26	24.02	30.33	20.72	6939.29	-0.65	-0.04	0.04	-0.08	-0.06	6.92
2/17/2024 15:00	44.36	37.29	30.65	25.74	7034.5	1058.04	269.59	165.46	213.92	269.72	6.78
2/17/2024 14:00	33.57	64.06	27.72	30.12	7350.72	1604.18	449.29	262.39	196.18	357.18	6.78
2/17/2024 13:00	26.42	52.38	27.89	24.61	7308.83	480.66	29.31	18.12	86.21	87.19	6.81
2/17/2024 12:00	26.4	23.27	28.21	24.71	7168.01	1419.81	388.51	231.37	158.94	289.09	6.75
2/17/2024 11:00	26.39	23.54	28.25	25.08	7050.68	1644.43	455.55	277.16	210.57	354.05	6.72
2/17/2024 10:00	26.52	25.51	28.94	25.6	6184.08	1146.39	288.06	155.79	127.7	193.02	6.85
2/17/2024 9:00	26.77	25.96	29.78	25.47	6056.83	-0.7	-0.06	0.03	-0.1	-0.06	6.87
2/17/2024 8:00	26.85	25.97	30.32	25.46	6067.25	-0.69	-0.06	0.03	-0.1	-0.06	6.88
2/17/2024 7:00	26.89	25.98	30.32	25.43	6018.4	-0.69	-0.06	0.03	-0.1	-0.07	7
2/17/2024 6:00	26.95	25.98	30.26	25.39	5994.13	-0.69	-0.06	0.03	-0.1	-0.07	7.15
2/17/2024 5:00	27.06	26.04	30.29	25.37	5989.4	-0.69	-0.05	0.03	-0.1	-0.07	6.97
2/17/2024 4:00	27.2	26.07	30.71	25.37	6126.22	-0.69	-0.06	0.03	-0.1	-0.07	6.89
2/17/2024 3:00	27.38	26.06	31.98	25.38	5948.48	-0.69	-0.05	0.03	-0.1	-0.06	6.82
2/17/2024 2:00	27.51	25.98	32.51	25.37	5954.11	-0.69	-0.05	0.03	-0.1	-0.07	7.01
2/17/2024 1:00	27.74	25.78	32.7	25.36	5963.67	-0.69	-0.06	0.03	-0.1	-0.06	6.93
2/17/2024 0:00	27.82	25.51	32.74	25.35	5932.16	-0.69	-0.05	0.03	-0.1	-0.06	6.9
2/16/2024 23:00	28.28	25.32	32.89	25.36	6064.9	-0.69	-0.05	0.04	-0.09	-0.07	6.89
2/16/2024 22:00	29.5	25.36	33.41	25.37	6767.55	-0.68	-0.05	0.04	-0.09	-0.06	6.86
2/16/2024 21:00	30.79	25.79	33.41	25.37	6779.71	-0.66	-0.05	0.04	-0.09	-0.06	6.83
2/16/2024 20:00	31.46	25.1	34.01	25.35	6733.71	-0.65	-0.05	0.04	-0.09	-0.06	6.78
2/16/2024 19:00	32.66	23.88	35.84	25.36	7502.15	997.45	243.13	146.57	170.82	228.99	6.58
2/16/2024 18:00	32.58	24.25	36.92	25.69	7689.05	1644.81	457.97	277.93	209.9	354.12	6.75
2/16/2024 17:00	32.31	26.98	37	25.84	7437.89	1519.43	412.87	239.44	183.59	323.51	6.57
2/16/2024 16:00	33.47	29.26	37.08	25.37	6849.79	-0.65	-0.05	0.04	-0.09	-0.06	6.77
2/16/2024 15:00	33.47	28.75	37.1	25.38	6862.33	-0.66	-0.05	0.04	-0.09	-0.06	6.79
2/16/2024 14:00	33.52	28.68	37.09	25.38	6885.75	-0.65	-0.05	0.04	-0.09	-0.06	6.77
2/16/2024 13:00	33.94	28.2	37.03	25.39	6891.35	133.91	31.2	17.08	92.84	83.7	6.84
2/16/2024 12:00	34.49	28.13	37.02	25.36	6915.84	-0.67	-0.05	0.04	-0.1	-0.06	6.75
2/16/2024 11:00	34.59	28.1	36.99	25.32	6944.57	-0.68	-0.05	0.03	-0.1	-0.06	6.82
2/16/2024 10:00	34.69	28.08	36.99	25.29	6998.3	-0.7	-0.06	0.03	-0.1	-0.07	6.83
2/16/2024 9:00	34.75	28.05	37	25.26	7043.93	-0.72	-0.06	0.03	-0.11	-0.08	6.77
2/16/2024 8:00	34.9	28.07	37.12	25.25	7087.02	-0.72	-0.06	0.03	-0.1	-0.08	6.67
2/16/2024 7:00	35.29	28.07	37.13	25.26	7108.19	-0.73	-0.06	0.03	-0.1	-0.08	6.71
2/16/2024 6:00	35.49	28.06	37.23	25.25	7123.78	-0.72	-0.06	0.03	-0.1	-0.07	6.76
2/16/2024 5:00	35.57	28.07	37.34	25.24	7139.38	-0.71	-0.06	0.03	-0.1	-0.08	6.73
2/16/2024 4:00	35.61	28.06	37.49	25.19	7150.42	-0.71	-0.06	0.03	-0.11	-0.08	6.74
2/16/2024 3:00	35.67	28.06	37.65	25.13	7163.71	-0.71	-0.06	0.03	-0.1	-0.08	6.75
2/16/2024 2:00	35.75	28.06	37.91	25.06	7169.79	-0.71	-0.06	0.03	-0.1	-0.08	6.77
2/16/2024 1:00	35.88	28.07	38.24	24.98	7180.66	-0.7	-0.06	0.03	-0.1	-0.08	6.81
2/16/2024 0:00	36.1	28.06	38.57	25.05	7197.77	-0.7	-0.06	0.03	-0.1	-0.08	6.71
2/15/2024 23:00	36.09	28.04	39.04	25.62	7211.34	-0.7	-0.06	0.03	-0.1	-0.08	6.71
2/15/2024 22:00	36.28	28.03	39.69	25.39	7226.6	-0.71	-0.06	0.03	-0.1	-0.08	6.76
2/15/2024 21:00	36.49	28	39.4	25.02	7240.81	-0.7	-0.06	0.03	-0.1	-0.08	6.72
2/15/2024 20:00	36.11	28.01	38.75	24	7254.5	-0.7	-0.06	0.03	-0.1	-0.08	6.73
2/15/2024 19:00	35.92	27.93	38.81	23.41	7270.92	-0.7	-0.06	0.03	-0.1	-0.08	6.65
2/15/2024 18:00	34.69	27.9	38.73	23.04	7285.24	-0.7	-0.06	0.03	-0.1	-0.08	6.56
2/15/2024 17:00	60.58	51.39	37.73	39.75	7301.64	316.27	25.82	16.74	83.23	87.09	6.63
2/15/2024 16:00	43.29	34.82	37.01	25.62	7322.72	640.31	-0.05	0.04	-0.09	-0.28	6.58
2/15/2024 15:00	44.18	36.26	40.08	26.04	7359.63	1342.31	336.68	201.33	156.94	247.52	6.57

Data Table 2_hourly

Timestamps	ro ait 2101 ec.output_v alue	ro ait 2102 ec.output_v alue	ro ait 2103 ec.output_v alue	ro ait 2104 ec.output_v alue	ro ait 2109 ec.output_v alue	ro fit 2100.output _value	ro fit 2102.output _value	ro fit 2103.output _value	ro fit 2104.output _value	ro fit 2105.output _value	ro ait 2101 ph.output_v alue
2/15/2024 14:00	41.75	36.82	38.27	26.24	7479.63	1684.01	474.14	278.84	196.8	363.06	6.59
2/15/2024 13:00	59.71	39.55	34.89	33.67	7574.48	1014.77	251.2	147.73	170.93	248.4	6.59
2/15/2024 12:00	52.28	47.68	34.77	31.72	8016.85	1550.71	435.08	261.3	221.65	355.75	6.62
2/15/2024 11:00	44.25	34.67	34.19	25.66	8696.32	1495.49	405.43	248.73	164.4	302.53	6.64
2/15/2024 10:00	43.34	37.82	34.33	26.13	8712.26	1644.79	456.47	276.27	210.35	354.33	6.68
2/15/2024 9:00	33.54	32.18	35.46	31.41	3577.17	930.65	234.06	137.24	117.38	170.22	7.27
2/15/2024 8:00	25.11	26.08	36.38	32.33	270.95	-0.71	-0.06	0.03	-0.1	-0.08	7.5
2/15/2024 7:00	24.99	25.95	37.15	30.39	274.71	-0.7	-0.06	0.03	-0.1	-0.05	7.52
2/15/2024 6:00	24.91	25.77	38.93	27.63	265.5	-0.69	-0.06	0.03	-0.1	-0.06	7.49
2/15/2024 5:00	25.16	25.63	39.13	25.5	259.99	-0.69	-0.06	0.03	-0.1	-0.06	7.52
2/15/2024 4:00	26.04	25.57	39.26	23.86	243.34	-0.69	-0.06	0.03	-0.1	-0.05	7.57
2/15/2024 3:00	27.06	25.67	39.35	23.13	223.85	-0.69	-0.06	0.03	-0.1	-0.06	7.6
2/15/2024 2:00	27.41	25.73	39.44	22.99	210.24	-0.69	-0.05	0.03	-0.1	-0.06	7.64
2/15/2024 1:00	28.03	25.8	39.37	22.94	200.33	-0.69	-0.05	0.04	-0.1	-0.05	7.69
2/15/2024 0:00	28.91	26.35	39.04	22.9	204.42	-0.66	-0.05	0.04	-0.09	-0.06	7.79
2/14/2024 23:00	46.23	37.77	37.83	24.36	5935.75	1226.66	340.54	197.89	205.02	324.56	7.17
2/14/2024 22:00	43.6	36.62	36.41	24.65	7666.76	1645.25	457.41	276.67	210.7	354.74	7.04
2/14/2024 21:00	42.78	37.4	35.07	25.8	7657.4	1644.73	456.76	275.18	210.02	354.12	7.07
2/14/2024 20:00	51.61	42.05	33.07	25.97	7636.53	1643.71	457.62	275.26	210.91	354.19	7.08
2/14/2024 19:00	58.92	46.57	31.49	27.77	7463.6	1642.31	454.64	275.96	211.2	354.09	7.08
2/14/2024 18:00	44.86	37.2	30.93	27.98	6371.77	1579.11	436.16	259.74	192.48	350.25	7.14
2/14/2024 17:00	38.53	43.05	35	27.83	5335.29	1115.43	303.47	173.63	187.22	292.19	7.23
2/14/2024 16:00	30.32	41.85	87.3	33.64	1805.41	482.02	90.63	53.39	125.43	142.79	7.41
2/14/2024 15:00	40.15	35.62	84.15	27.74	4735.55	1346.92	348.44	207.95	157.13	270.41	7.21
2/14/2024 14:00	60.06	46.76	108.14	27.06	4929.12	1144.75	305.62	181.83	209.06	296.43	7.22
2/14/2024 13:00	44.14	39.9	116.52	29.05	7739	1676.3	470.2	275.14	199.92	358.2	7.1
2/14/2024 12:00	49.22	41.25	113.98	29.05	3774.7	984.73	279.62	161.71	216.29	301.01	7.24
2/14/2024 11:00	57.67	49.37	46.88	41.81	4040.86	818.85	134.57	78.44	79.23	100.84	6.83
2/14/2024 10:00	47.05	41.14	45.35	32.69	4626.86	931.98	192.24	121.85	132.97	142.52	7.14
2/14/2024 9:00	61.64	48.27	45.29	29.14	7777.8	1708.27	481.73	282.02	190.68	365.83	7.14
2/14/2024 8:00	45.57	44.79	45.19	32.15	2392.08	631.98	140.3	89.48	187.47	203.51	7.31
2/14/2024 7:00	46.77	38.37	42.44	27.77	8072.43	1692.21	475.81	279.67	195.62	367.1	7.17
2/14/2024 6:00	43.67	39.13	42.06	28.33	8296.35	1662.12	464.06	274.72	204.58	352.54	7.18
2/14/2024 5:00	60.98	48.25	41.67	28.53	7848.63	1644.14	455.55	274.84	210.63	353.86	7.17
2/14/2024 4:00	51.77	43.57	42.96	28.68	8016.69	1644.17	455.87	272.28	210.94	353.34	7.18
2/14/2024 3:00	48	40.19	43.08	28.5	8093	1643.51	457.51	273.17	210.34	354.41	7.19
2/14/2024 2:00	46.37	39.99	43.84	28.62	8142.54	1644.8	455.68	274.04	210.57	353.61	7.19
2/14/2024 1:00	53.08	44.96	43.44	28.83	8164.56	1644.52	458.34	273.46	210.49	353.99	7.19
2/14/2024 0:00	56.36	46.61	43.14	28.47	8242.7	1644.34	457.79	272.23	210.8	354.21	7.19
2/13/2024 23:00	48.98	41.94	42.82	28.51	8401.32	1643.18	458.13	271.04	210.87	353.66	7.2
2/13/2024 22:00	48.09	39.98	43.25	28.61	8477.89	1643.5	459.41	273.24	210.69	354.12	7.2
2/13/2024 21:00	45.36	40.55	43.06	28.82	8440.96	1657.49	462.44	275.21	207.53	353.73	7.18
2/13/2024 20:00	43.46	38.65	42.67	28.23	8677.71	1696.18	477.62	276.31	192.79	366.13	7.2
2/13/2024 19:00	50.98	43.28	41	29.13	8570.73	1644.56	458.26	270.09	210.29	354.79	7.18
2/13/2024 18:00	49.14	40.66	44	29.1	8631.23	1643.42	457.91	272.76	210.78	354.14	7.16
2/13/2024 17:00	47.2	41.13	43.9	29.11	8641.19	1643.45	458.08	273.61	210.9	355.18	6.34
2/13/2024 16:00	46.32	41.18	45.09	29.67	8732.25	1643.35	456.87	272.16	210.67	354.05	5.76
2/13/2024 15:00	54.13	45.73	43.41	29.28	8683.68	1643.12	456.9	271.71	210.6	356.02	5.83
2/13/2024 14:00	54.65	45.22	44.36	29.07	8658.65	1643.61	458.99	273.21	210.49	354.12	5.88
2/13/2024 13:00	49.21	41.16	44.92	29.35	9097.91	1644.04	457.52	273.83	210.71	354.43	5.92
2/13/2024 12:00	46.95	41.75	45.12	29.52	9173.93	1643.44	457.91	272.98	210.43	354.38	5.91

Data Table 2_hourly

Timestamps	ro ait 2101 ec.output_v alue	ro ait 2102 ec.output_v alue	ro ait 2103 ec.output_v alue	ro ait 2104 ec.output_v alue	ro ait 2109 ec.output_v alue	ro fit 2100.output _value	ro fit 2102.output _value	ro fit 2103.output _value	ro fit 2104.output _value	ro fit 2105.output _value	ro ait 2101 ph.output_v alue
2/13/2024 11:00	49.74	42.65	45.1	29.57	9219.65	1643.41	456.41	272.45	210.47	355.46	5.94
2/13/2024 10:00	68.23	52.76	44.87	29.13	9277.09	1682.83	472.03	277.75	198.67	364.27	5.95
2/13/2024 9:00	47.69	39.82	42.1	28.67	9871.48	1670.65	466	276.04	201.74	355.93	6.05
2/13/2024 8:00	62.19	54.72	32.08	40.65	3897.05	707.85	177.64	101.82	167.4	199.43	6.2
2/13/2024 7:00	34.25	30.41	42.98	27.93	703.14	306.26	62.98	37.07	114.07	119.07	9.56
2/13/2024 6:00	26	22.53	55.1	29.26	608.48	-0.77	-0.08	0.02	-0.11	0.09	14.01
2/13/2024 5:00	26.01	22.57	55.24	29.33	596.63	-0.77	-0.08	0.02	-0.12	0.1	14
2/13/2024 4:00	26.02	22.56	55.24	29.22	568.84	-0.77	-0.08	0.02	-0.11	0.11	14
2/13/2024 3:00	26.02	22.54	55.39	28.9	581.4	-0.75	-0.07	0.02	-0.11	0.12	14
2/13/2024 2:00	26.02	22.52	55.5	28.56	642.2	-0.73	-0.07	0.02	-0.11	0.12	13.92
2/13/2024 1:00	26.03	22.4	55.6	28.58	597.18	-0.73	-0.07	0.02	-0.11	0.14	13.95
2/13/2024 0:00	26.05	22.47	55.69	28.45	571.24	-0.73	-0.07	0.02	-0.11	0.14	13.99
2/12/2024 23:00	26.08	22.54	55.81	28.34	553.83	-0.73	-0.07	0.02	-0.1	0.12	14.01
2/12/2024 22:00	26.11	22.34	55.89	28.31	505.55	-0.72	-0.07	0.03	-0.11	0.03	14.01
2/12/2024 21:00	26.01	21.94	55.95	28.47	488.55	192.92	35.91	19.32	95.69	97.97	10.14
2/12/2024 20:00	25.82	21.91	55.96	28.48	484.37	-0.7	-0.06	0.03	-0.1	-0.06	7.56
2/12/2024 19:00	25.83	21.96	55.51	28.39	483.23	-0.69	-0.06	0.03	-0.1	0.06	7.59
2/12/2024 18:00	25.83	21.99	55.18	28.28	483.8	-0.69	-0.06	0.03	-0.1	0.09	7.73
2/12/2024 17:00	25.84	22.04	55.33	28.22	487.2	-0.69	-0.06	0.03	-0.1	0.08	8.06
2/12/2024 16:00	25.84	22.1	55.42	28.17	484.44	-0.69	-0.05	0.03	-0.09	0.01	8.15
2/12/2024 15:00	25.84	22.16	55.51	28.21	478.5	-0.66	-0.05	0.04	-0.09	-0.03	8.25
2/12/2024 14:00	25.84	22.19	55.85	28	473.7	-0.66	-0.05	0.04	-0.09	0.07	8.05
2/12/2024 13:00	25.83	22.19	56.09	27.86	470.94	-0.66	-0.05	0.04	-0.09	0.08	7.98
2/12/2024 12:00	25.81	22.2	56.5	27.74	470.57	-0.69	-0.05	0.03	-0.09	0.07	8.14
2/12/2024 11:00	25.79	22.19	56.5	27.88	469.16	-0.7	-0.06	0.03	-0.1	0.1	8.13
2/12/2024 10:00	25.77	22.23	56.06	27.83	467.71	-0.72	-0.06	0.03	-0.1	0.1	8.1
2/12/2024 9:00	25.75	22.26	55.79	27.45	467.09	-0.74	-0.07	0.02	-0.11	-0.11	7.92
2/12/2024 8:00	25.74	22.28	55.75	27.36	466.86	-0.76	-0.07	0.02	-0.11	-0.05	8.05
2/12/2024 7:00	25.73	22.07	55.53	27.3	471.84	-0.77	-0.07	0.02	-0.12	-0.04	7.88
2/12/2024 6:00	25.74	22.14	55.58	27.21	476.53	-0.77	-0.08	0.02	-0.11	-0.06	7.85
2/12/2024 5:00	25.74	22.12	55.51	27.19	477.17	-0.77	-0.08	0.02	-0.11	-0.09	8.06
2/12/2024 4:00	25.74	22.16	55.34	27.16	477.94	-0.76	-0.07	0.02	-0.11	-0.07	8.1
2/12/2024 3:00	25.74	22.18	55.19	27.14	478.52	-0.77	-0.08	0.02	-0.11	-0.11	8.13
2/12/2024 2:00	25.74	22.22	54.94	27.12	479.81	-0.75	-0.07	0.02	-0.11	-0.09	8.05
2/12/2024 1:00	25.74	22.44	54.82	27.13	480.74	-0.74	-0.07	0.02	-0.11	-0.04	8.23
2/12/2024 0:00	25.74	22.6	54.71	27.13	482.37	-0.74	-0.07	0.03	-0.11	-0.03	8.22
2/11/2024 23:00	25.74	22.66	54.56	27.08	482.92	-0.74	-0.07	0.03	-0.1	0.04	8.31
2/11/2024 22:00	25.74	22.67	54.36	27.03	482.89	-0.74	-0.07	0.03	-0.1	0.07	8.39
2/11/2024 21:00	25.74	22.77	54.36	27.01	481.83	-0.73	-0.07	0.03	-0.1	0.03	8.23
2/11/2024 20:00	25.75	22.93	54.18	26.96	480.19	-0.72	-0.06	0.03	-0.1	0.02	8.33
2/11/2024 19:00	25.75	23.13	53.58	26.82	473.42	-0.7	-0.06	0.03	-0.1	-0.03	8.56
2/11/2024 18:00	25.74	23.27	54.25	26.78	462.65	-0.69	-0.06	0.03	-0.1	-0.03	8.64
2/11/2024 17:00	25.74	23.36	55.4	26.67	452.45	-0.69	-0.06	0.03	-0.09	-0.05	8.54
2/11/2024 16:00	25.73	23.48	55.95	26.63	449.45	-0.69	-0.05	0.03	-0.1	-0.08	8.53
2/11/2024 15:00	25.72	23.24	56.14	26.62	448.88	-0.69	-0.05	0.03	-0.1	-0.08	8.69
2/11/2024 14:00	25.71	23.93	56.15	26.57	448.37	-0.69	-0.06	0.03	-0.1	-0.05	8.6
2/11/2024 13:00	25.7	24.23	55.62	26.51	448.06	-0.7	-0.06	0.03	-0.1	-0.06	8.64
2/11/2024 12:00	25.69	24.32	54.66	26.46	449.13	-0.7	-0.06	0.03	-0.1	-0.04	8.62
2/11/2024 11:00	25.67	24.37	53.47	26.41	450.2	-0.71	-0.06	0.03	-0.1	-0.09	8.57
2/11/2024 10:00	25.66	24.34	52.16	26.38	450.6	-0.73	-0.07	0.03	-0.11	-0.06	8.75
2/11/2024 9:00	25.65	24.22	52.09	26.36	451.64	-0.74	-0.07	0.02	-0.11	-0.15	8.68

Data Table 2_hourly

Timestamps	ro ait 2101 ec.output_v alue	ro ait 2102 ec.output_v alue	ro ait 2103 ec.output_v alue	ro ait 2104 ec.output_v alue	ro ait 2109 ec.output_v alue	ro fit 2100.output _value	ro fit 2102.output _value	ro fit 2103.output _value	ro fit 2104.output _value	ro fit 2105.output _value	ph.output_v alue
2/11/2024 8:00	25.64	24.39	50.99	26.29	451.92	-0.75	-0.07	0.02	-0.11	-0.07	8.53
2/11/2024 7:00	25.64	24.75	51.64	26.27	452.48	-0.75	-0.07	0.02	-0.11	0.07	8.53
2/11/2024 6:00	25.64	24.96	51.71	26.26	452.7	-0.74	-0.07	0.02	-0.11	0.16	8.49
2/11/2024 5:00	25.63	25.23	51.35	26.25	452.61	-0.74	-0.07	0.02	-0.11	0.13	8.5
2/11/2024 4:00	25.63	25.54	51.02	26.24	452.74	-0.73	-0.07	0.02	-0.1	0.04	8.55
2/11/2024 3:00	25.62	25.71	50.62	26.23	452.71	-0.74	-0.07	0.02	-0.11	-0.05	8.62
2/11/2024 2:00	25.62	26.06	50.25	26.2	452.55	-0.73	-0.07	0.02	-0.1	-0.07	8.86
2/11/2024 1:00	25.61	26.57	49.66	26.15	453.29	-0.73	-0.07	0.03	-0.1	-0.04	8.84
2/11/2024 0:00	25.61	26.94	49.19	26.1	452.9	-0.73	-0.07	0.03	-0.1	-0.05	8.78
2/10/2024 23:00	25.61	27.12	48.83	26.05	453.02	-0.73	-0.06	0.03	-0.1	-0.08	8.97
2/10/2024 22:00	25.6	27.52	48.14	26.03	453.22	-0.71	-0.06	0.03	-0.1	-0.1	8.97

Data Table 2_hourly

Timestamps	ro ait 2109 ph.output_v alue	ro pit 2001.output _value	ro pit 2100.output _value	ro pit 2101.output _value	ro pit 2102.output _value	ro pit 2103.output _value	ro pit 2104.output _value	ro pit 2105.output _value	ro pit 2106.output _value	ro pit 2107.output _value	ro pit 2200.output _value
2/19/2024 20:00	6.77	NoData	5.74	5.11	5.13	5.87	5.07	6.27	5.22	5.87	84.82
2/19/2024 19:00	7.12	NoData	5.72	5.06	5.08	5.84	5.03	6.24	5.18	5.85	84.78
2/19/2024 18:00	6.67	NoData	6.11	5.25	5.25	6.16	5.37	6.54	5.47	6.09	84.79
2/19/2024 17:00	6.67	NoData	116.53	11.75	11.43	101.58	113.04	102.67	125.15	111.34	84.8
2/19/2024 16:00	6.67	NoData	141.45	11.94	11.51	123.41	137.44	125.16	159.56	143.28	84.76
2/19/2024 15:00	6.68	NoData	65.96	8.92	8.64	59.28	64	57.4	68.41	62.84	84.77
2/19/2024 14:00	6.7	NoData	9.61	2.8	2.87	8.71	8.33	8.83	8.04	7.71	84.81
2/19/2024 13:00	6.68	NoData	33.81	4.85	4.22	28.71	31.62	28.55	37.15	34.89	84.78
2/19/2024 12:00	6.66	NoData	145.69	14.64	14.17	127.58	141.73	129.56	161.91	145.79	84.73
2/19/2024 11:00	6.66	NoData	99.41	9.84	9.38	85.38	96.5	85.36	110.22	99.4	84.67
2/19/2024 10:00	6.66	NoData	7.87	5.06	5.12	7.72	7.06	7.98	7.11	7.7	84.8
2/19/2024 9:00	6.66	NoData	113.58	10.41	10.08	98.26	108.62	98.12	121.02	106.34	84.85
2/19/2024 8:00	6.66	NoData	140	10.59	10.15	121.76	136	123.69	157.27	141.11	84.86
2/19/2024 7:00	6.66	NoData	142.73	10.65	10.19	124.16	138.56	126.16	157.55	142.3	84.87
2/19/2024 6:00	6.65	NoData	141.54	10.68	10.22	123.38	138.05	125.47	158.35	142.73	84.8
2/19/2024 5:00	6.65	NoData	140.35	10.59	10.15	122.22	135.11	122.92	150.68	134.4	84.85
2/19/2024 4:00	6.65	NoData	139.09	10.62	10.18	121.01	135.03	122.78	155.69	139.53	84.84
2/19/2024 3:00	6.64	NoData	139.4	10.63	10.19	121.06	134.79	122.67	153.75	137.99	84.87
2/19/2024 2:00	6.64	NoData	139.46	10.63	10.2	121.27	134.67	122.46	152.8	136.98	84.8
2/19/2024 1:00	6.63	NoData	138.94	10.63	10.2	120.83	134.38	122.31	152.86	136.75	84.81
2/19/2024 0:00	6.63	NoData	138.5	10.63	10.19	120.35	134.63	122.28	154.21	138.4	84.86
2/18/2024 23:00	6.63	NoData	138.35	10.63	10.19	120.1	134.41	122.21	154.42	138.58	84.83
2/18/2024 22:00	6.63	NoData	139.06	10.63	10.19	120.73	134.4	122.18	152.27	136.77	84.87
2/18/2024 21:00	6.62	NoData	138.44	10.63	10.19	120.48	133.8	121.54	151.32	134.85	84.78
2/18/2024 20:00	6.63	NoData	140.12	10.67	10.21	121.82	136.91	124.27	156.94	141.42	84.85
2/18/2024 19:00	6.63	NoData	138.37	10.62	10.17	120.05	134.27	121.9	152.82	137.42	84.87
2/18/2024 18:00	6.63	NoData	137.39	10.6	10.16	119.02	132.05	119.89	148.95	133.51	84.85
2/18/2024 17:00	6.64	NoData	136.54	10.6	10.16	118.45	131.13	119.01	147.43	131.31	84.8
2/18/2024 16:00	6.64	NoData	135.49	10.61	10.18	117.39	130.15	118.02	146.38	130.35	84.81
2/18/2024 15:00	6.65	NoData	134.93	10.63	10.19	116.92	129.24	117.03	143.54	127.37	84.85
2/18/2024 14:00	6.66	NoData	134.41	10.57	10.14	116.24	128.26	116.03	142.26	126.06	84.8
2/18/2024 13:00	6.67	NoData	134.32	10.61	10.17	116.16	128.15	116.03	142.48	126.67	84.78
2/18/2024 12:00	6.7	NoData	134.08	10.62	10.19	116.12	127.94	115.74	141.58	125.73	84.79
2/18/2024 11:00	6.74	NoData	134.16	10.65	10.21	115.95	128.07	115.87	142.42	126.41	84.84
2/18/2024 10:00	6.8	NoData	134.59	10.65	10.2	116.59	128.51	116.21	141.07	124.5	84.84
2/18/2024 9:00	6.77	NoData	136.59	10.74	10.27	118.35	133.42	120.77	152.67	137.48	84.85
2/18/2024 8:00	6.68	NoData	134.35	10.61	10.18	116.46	129.02	116.66	144.79	128.26	84.83
2/18/2024 7:00	6.68	NoData	135.82	10.53	10.09	117.75	129.34	117.13	140.58	124.65	84.79
2/18/2024 6:00	6.87	NoData	78.27	7.8	6.49	63.37	64.26	72.41	83.55	63.57	84.77
2/18/2024 5:00	6.98	NoData	2.81	1.88	1.89	2.97	1.82	3.44	2	2.93	84.74
2/18/2024 4:00	6.98	NoData	2.84	1.91	1.91	3	1.85	3.46	2.03	2.94	84.74
2/18/2024 3:00	6.92	NoData	2.86	1.94	1.94	3.02	1.87	3.49	2.05	2.98	84.73
2/18/2024 2:00	6.95	NoData	2.89	1.97	1.97	3.05	1.91	3.52	2.1	2.98	84.75
2/18/2024 1:00	6.84	NoData	2.93	2.01	2.01	3.08	1.95	3.55	2.13	2.97	84.74
2/18/2024 0:00	6.91	NoData	3	2.07	2.08	3.16	2.04	3.63	2.21	2.94	84.73
2/17/2024 23:00	6.82	NoData	3.04	2.12	2.12	3.2	2.07	3.67	2.25	2.93	84.74
2/17/2024 22:00	6.94	NoData	3.04	2.13	2.13	3.21	2.07	3.69	2.27	2.98	84.75
2/17/2024 21:00	6.76	NoData	3.1	2.18	2.21	3.26	2.14	3.71	2.32	3.01	84.74
2/17/2024 20:00	6.81	NoData	3.46	2.57	2.58	3.61	2.51	4.07	2.71	3.39	84.76
2/17/2024 19:00	6.78	NoData	3.64	2.78	2.78	3.79	2.73	4.25	2.91	3.58	84.75
2/17/2024 18:00	6.71	NoData	3.7	2.84	2.85	3.85	2.8	4.32	2.98	3.65	84.74

Data Table 2_hourly

Timestamps	ro pit 2109.output_value	ro pit 2001.output_value	ro pit 2100.output_value	ro pit 2101.output_value	ro pit 2102.output_value	ro pit 2103.output_value	ro pit 2104.output_value	ro pit 2105.output_value	ro pit 2106.output_value	ro pit 2107.output_value	ro pit 2200.output_value
2/17/2024 17:00	6.78	NoData	4.01	3.16	3.18	4.18	3.08	4.61	3.29	3.95	84.75
2/17/2024 16:00	6.92	NoData	5.38	4.53	4.58	5.39	4.59	5.89	4.74	5.3	84.75
2/17/2024 15:00	6.78	NoData	84.62	10.21	9.95	74.93	80.96	73.56	87.08	78.14	84.75
2/17/2024 14:00	6.78	NoData	127.06	11.94	11.53	110.47	123.35	111.26	135.97	120.16	84.65
2/17/2024 13:00	6.81	NoData	16.23	4.51	5.21	12.69	15.51	13.14	14.36	12.31	84.77
2/17/2024 12:00	6.75	NoData	106.01	10.22	9.91	92.72	104.32	94.23	117.13	105.98	84.8
2/17/2024 11:00	6.72	NoData	135.47	11.94	11.5	117.27	129.54	117.35	144.1	128.23	84.78
2/17/2024 10:00	6.85	NoData	92.66	9.48	9.37	80.34	80.66	79.84	92.71	80.16	84.78
2/17/2024 9:00	6.87	NoData	5.23	4.51	4.53	5.39	4.46	5.82	4.63	5.29	84.79
2/17/2024 8:00	6.88	NoData	5.31	4.59	4.61	5.46	4.55	5.9	4.72	5.37	84.77
2/17/2024 7:00	7	NoData	5.38	4.68	4.69	5.54	4.62	5.97	4.8	5.46	84.77
2/17/2024 6:00	7.15	NoData	5.47	4.76	4.78	5.62	4.72	6.06	4.88	5.54	84.77
2/17/2024 5:00	6.97	NoData	5.56	4.86	4.87	5.71	4.81	6.14	4.98	5.63	84.76
2/17/2024 4:00	6.89	NoData	5.64	4.95	4.97	5.8	4.91	6.22	5.08	5.73	84.76
2/17/2024 3:00	6.82	NoData	5.72	5.04	5.06	5.88	4.99	6.31	5.16	5.82	84.78
2/17/2024 2:00	7.01	NoData	5.81	5.12	5.13	5.96	5.08	6.38	5.24	5.9	84.78
2/17/2024 1:00	6.93	NoData	5.88	5.2	5.22	6.04	5.16	6.45	5.32	5.98	84.76
2/17/2024 0:00	6.9	NoData	5.96	5.28	5.3	6.11	5.24	6.52	5.41	6.07	84.78
2/16/2024 23:00	6.89	NoData	6.04	5.34	5.37	6.18	5.32	6.6	5.49	6.14	84.77
2/16/2024 22:00	6.86	NoData	6.05	5.36	5.38	6.2	5.35	6.62	5.52	6.16	84.77
2/16/2024 21:00	6.83	NoData	6.05	5.35	5.37	6.22	5.35	6.62	5.52	6.16	84.78
2/16/2024 20:00	6.78	NoData	6.05	5.33	5.35	6.22	5.35	6.62	5.52	6.16	84.77
2/16/2024 19:00	6.58	NoData	71.96	9.41	9.38	60.64	69.34	65.42	78.24	71.37	84.79
2/16/2024 18:00	6.75	NoData	134.84	11.6	11.18	116.8	130.02	117.83	143.86	127.42	84.8
2/16/2024 17:00	6.57	NoData	125.18	10.12	9.89	106.37	121.82	107.68	135.1	119.6	84.72
2/16/2024 16:00	6.77	NoData	6.09	5.37	5.39	6.22	5.35	6.62	5.52	6.16	84.67
2/16/2024 15:00	6.79	NoData	6.09	5.36	5.38	6.23	5.35	6.62	5.52	6.16	84.69
2/16/2024 14:00	6.77	NoData	6.1	5.37	5.39	6.24	5.35	6.65	5.53	6.18	84.7
2/16/2024 13:00	6.84	NoData	17.72	7.64	7.72	14.74	18	14.07	15.18	12.47	84.7
2/16/2024 12:00	6.75	NoData	6.09	5.39	5.41	6.22	5.35	6.66	5.52	6.16	84.7
2/16/2024 11:00	6.82	NoData	6.07	5.39	5.41	6.22	5.34	6.66	5.52	6.15	84.71
2/16/2024 10:00	6.83	NoData	6.05	5.39	5.41	6.22	5.34	6.63	5.51	6.15	84.72
2/16/2024 9:00	6.77	NoData	6.05	5.39	5.41	6.21	5.34	6.61	5.51	6.15	84.72
2/16/2024 8:00	6.67	NoData	6.05	5.39	5.41	6.21	5.34	6.61	5.51	6.15	84.7
2/16/2024 7:00	6.71	NoData	6.05	5.39	5.41	6.21	5.34	6.61	5.51	6.15	84.71
2/16/2024 6:00	6.76	NoData	6.05	5.39	5.41	6.21	5.34	6.62	5.51	6.15	84.71
2/16/2024 5:00	6.73	NoData	6.05	5.39	5.41	6.21	5.34	6.65	5.51	6.15	84.7
2/16/2024 4:00	6.74	NoData	6.05	5.4	5.41	6.21	5.34	6.65	5.51	6.15	84.7
2/16/2024 3:00	6.75	NoData	6.05	5.4	5.41	6.21	5.34	6.65	5.51	6.15	84.7
2/16/2024 2:00	6.77	NoData	6.05	5.4	5.42	6.21	5.34	6.65	5.51	6.15	84.7
2/16/2024 1:00	6.81	NoData	6.05	5.4	5.42	6.21	5.34	6.65	5.51	6.15	84.7
2/16/2024 0:00	6.71	NoData	6.05	5.4	5.42	6.21	5.34	6.65	5.51	6.15	84.69
2/15/2024 23:00	6.71	NoData	6.05	5.4	5.42	6.21	5.34	6.65	5.51	6.15	84.69
2/15/2024 22:00	6.76	NoData	6.05	5.4	5.42	6.21	5.34	6.65	5.51	6.15	84.71
2/15/2024 21:00	6.72	NoData	6.05	5.4	5.42	6.21	5.34	6.65	5.51	6.15	84.7
2/15/2024 20:00	6.73	NoData	6.05	5.39	5.41	6.22	5.34	6.65	5.51	6.15	84.7
2/15/2024 19:00	6.65	NoData	6.05	5.38	5.4	6.21	5.34	6.65	5.51	6.15	84.7
2/15/2024 18:00	6.56	NoData	6.06	5.36	5.38	6.22	5.34	6.65	5.51	6.16	84.7
2/15/2024 17:00	6.63	NoData	17.13	6.25	6.13	12.87	15.25	13.36	14.31	12.27	84.73
2/15/2024 16:00	6.58	NoData	4.29	1.88	1.87	4.45	4.14	5.59	4.27	4.95	84.74
2/15/2024 15:00	6.57	NoData	98.02	9.37	9.48	82.95	93.76	89	107.3	96.25	84.76

Data Table 2_hourly

Timestamps	ro ait 2109 ph.output_v alue	ro pit 2001.output _value	ro pit 2100.output _value	ro pit 2101.output _value	ro pit 2102.output _value	ro pit 2103.output _value	ro pit 2104.output _value	ro pit 2105.output _value	ro pit 2106.output _value	ro pit 2107.output _value	ro pit 2200.output _value
2/15/2024 14:00	6.59	NoData	133.87	12.07	11.63	116.01	131.32	118.8	148.1	132.63	84.68
2/15/2024 13:00	6.59	NoData	70.94	8.79	8.59	62.01	70.31	62.14	76.54	68.07	84.72
2/15/2024 12:00	6.62	NoData	129.17	14.15	13.76	111.93	126.04	114.35	140.99	124.32	84.76
2/15/2024 11:00	6.64	NoData	114.44	12.41	12.04	100.16	112.13	101.65	127.43	115.37	84.81
2/15/2024 10:00	6.68	NoData	136.68	14.56	14.13	118.78	132.72	120.55	148.72	132.85	84.77
2/15/2024 9:00	7.27	NoData	91.81	8.94	8.7	68.06	93.15	73.6	84.45	86.59	84.74
2/15/2024 8:00	7.5	NoData	5.06	4.3	4.32	5.3	4.28	5.7	4.57	5.22	84.78
2/15/2024 7:00	7.52	NoData	6.09	5.4	5.42	6.24	5.35	6.65	5.51	6.17	84.78
2/15/2024 6:00	7.49	NoData	6.08	5.4	5.42	6.24	5.35	6.67	5.51	6.19	84.78
2/15/2024 5:00	7.52	NoData	6.09	5.41	5.42	6.24	5.36	6.68	5.51	6.19	84.78
2/15/2024 4:00	7.57	NoData	6.09	5.41	5.43	6.24	5.36	6.68	5.52	6.19	84.79
2/15/2024 3:00	7.6	NoData	6.09	5.41	5.43	6.24	5.35	6.69	5.53	6.2	84.78
2/15/2024 2:00	7.64	NoData	6.09	5.41	5.42	6.25	5.35	6.69	5.56	6.2	84.78
2/15/2024 1:00	7.69	NoData	6.09	5.39	5.41	6.25	5.36	6.69	5.56	6.2	84.78
2/15/2024 0:00	7.79	NoData	6.09	5.35	5.37	6.24	5.37	6.69	5.56	6.2	84.78
2/14/2024 23:00	7.17	NoData	98.68	10.93	10.58	88.4	100.1	89.66	111.96	99.77	84.83
2/14/2024 22:00	7.04	NoData	134.46	12.16	11.71	116.39	131.52	119.32	146.54	130.67	84.82
2/14/2024 21:00	7.07	NoData	133.49	12.21	11.77	115.48	130.83	118.62	146.34	130.42	84.82
2/14/2024 20:00	7.08	NoData	133.38	12.14	11.7	115.42	130.62	118.49	145.7	129.81	84.84
2/14/2024 19:00	7.08	NoData	132.83	12.06	11.62	114.82	129.01	116.88	142.18	125.87	84.8
2/14/2024 18:00	7.14	NoData	122.19	10.9	10.49	107.73	122.01	108.9	132.99	117.51	84.76
2/14/2024 17:00	7.23	NoData	84.5	9.56	9.31	72.13	86.15	76.4	90.46	82.25	84.7
2/14/2024 16:00	7.41	NoData	38.03	6.9	6.96	30.83	36.48	31.36	32.75	28.27	84.74
2/14/2024 15:00	7.21	NoData	112.02	9.69	9.25	93.23	101.92	92.42	114.13	103.39	84.76
2/14/2024 14:00	7.22	NoData	89.21	10.56	10.19	78.22	86.96	76.65	95.7	85.74	84.8
2/14/2024 13:00	7.1	NoData	129.34	11.15	10.7	111.41	127.65	115.29	145.79	130.59	84.79
2/14/2024 12:00	7.24	NoData	81.81	11.1	10.74	70.85	83.84	71.34	84.71	74.8	84.81
2/14/2024 11:00	6.83	NoData	43.64	6.1	5.95	37.5	40.75	39.19	44.33	38.82	84.8
2/14/2024 10:00	7.14	NoData	58.95	7.91	7.35	51.18	56.59	51.47	60.27	48.43	84.8
2/14/2024 9:00	7.14	NoData	133.45	10.81	10.33	115.18	131.1	118.43	145.41	130.41	84.79
2/14/2024 8:00	7.31	NoData	46.81	8.05	8.1	40.9	45.93	40.42	45.87	37.19	84.81
2/14/2024 7:00	7.17	NoData	136.2	13.09	12.61	117.83	134.01	121.37	149.9	134.75	84.89
2/14/2024 6:00	7.18	NoData	132.8	12.18	11.74	114.76	130.63	118.27	148.49	132.52	84.82
2/14/2024 5:00	7.17	NoData	132.42	12.14	11.71	114.39	128.73	116.51	141.68	125.47	84.91
2/14/2024 4:00	7.18	NoData	131.14	12.13	11.7	113.19	128.52	116.22	145.12	129.21	84.88
2/14/2024 3:00	7.19	NoData	131.65	12.14	11.71	113.47	128.45	116.26	143.71	128.13	84.92
2/14/2024 2:00	7.19	NoData	131.77	12.22	11.79	113.71	128.36	116.16	143.23	127.29	84.87
2/14/2024 1:00	7.19	NoData	131.57	12.15	11.71	113.66	128.32	116.06	142.45	126.26	84.88
2/14/2024 0:00	7.19	NoData	131.18	12.14	11.71	113.23	128.39	116.22	143.61	127.18	84.9
2/13/2024 23:00	7.2	NoData	130.37	12.15	11.71	112.46	128.11	115.96	145.49	129.57	84.92
2/13/2024 22:00	7.2	NoData	131.26	12.15	11.71	113.08	127.99	115.98	143.28	127.8	84.88
2/13/2024 21:00	7.18	NoData	131.42	12.19	11.74	113.54	128.52	116.24	143.7	127.57	84.84
2/13/2024 20:00	7.2	NoData	131.46	12.28	11.82	113.38	130.64	117.98	149.08	133.95	84.88
2/13/2024 19:00	7.18	NoData	128.71	12.14	11.71	110.96	126.52	114.12	144.23	127.94	84.88
2/13/2024 18:00	7.16	NoData	130.02	12.15	11.71	111.89	127.24	114.97	140.9	125.2	84.88
2/13/2024 17:00	6.34	NoData	130.01	12.14	11.71	112.14	126.79	114.6	139.84	123.74	84.83
2/13/2024 16:00	5.76	NoData	129.47	12.19	11.76	111.56	126.71	114.63	140.52	125.02	84.86
2/13/2024 15:00	5.83	NoData	129.47	12.17	11.73	111.39	126.51	114.35	139.66	123.87	84.88
2/13/2024 14:00	5.88	NoData	129.54	12.14	11.71	111.46	125.7	113.75	137.56	121.62	84.89
2/13/2024 13:00	5.92	NoData	130.42	12.15	11.73	112.27	127.17	115	139.26	123.43	84.88
2/13/2024 12:00	5.91	NoData	130.05	12.16	11.73	112.22	127.13	114.9	139.73	122.81	84.84

Data Table 2_hourly

Timestamps	ro ait 2109 ph.output_v alue	ro pit 2001.output _value	ro pit 2100.output _value	ro pit 2101.output _value	ro pit 2102.output _value	ro pit 2103.output _value	ro pit 2104.output _value	ro pit 2105.output _value	ro pit 2106.output _value	ro pit 2107.output _value	ro pit 2200.output _value
2/13/2024 11:00	5.94	NoData	129.59	12.18	11.75	111.54	126.76	114.54	140.17	124.33	84.88
2/13/2024 10:00	5.95	NoData	132.37	12.29	11.84	114.39	129.53	116.83	141.14	124.48	84.9
2/13/2024 9:00	6.05	NoData	131.2	12.19	11.75	113	128.23	116.07	142.36	127	84.84
2/13/2024 8:00	6.2	NoData	46.83	7.81	7.95	40.46	46.27	41.7	47.62	36.58	84.8
2/13/2024 7:00	9.56	NoData	24.85	6.64	6.72	21.35	23.27	18.94	20.3	6.66	84.77
2/13/2024 6:00	14.01	NoData	6.21	5.48	5.5	6.38	5.44	6.8	5.64	6.62	84.85
2/13/2024 5:00	14	NoData	6.23	5.48	5.5	6.38	5.44	6.8	5.64	6.62	84.84
2/13/2024 4:00	14	NoData	6.23	5.48	5.5	6.38	5.45	6.8	5.64	6.63	84.85
2/13/2024 3:00	14	NoData	6.22	5.47	5.49	6.38	5.44	6.8	5.65	6.63	84.84
2/13/2024 2:00	13.92	NoData	6.23	5.47	5.49	6.38	5.45	6.8	5.65	6.63	84.83
2/13/2024 1:00	13.95	NoData	6.23	5.47	5.49	6.38	5.45	6.82	5.65	6.63	84.85
2/13/2024 0:00	13.99	NoData	6.24	5.47	5.49	6.38	5.45	6.81	5.65	6.6	84.84
2/12/2024 23:00	14.01	NoData	6.23	5.46	5.48	6.38	5.45	6.82	5.65	6.58	84.85
2/12/2024 22:00	14.01	NoData	6.23	5.45	5.47	6.39	5.45	6.83	5.69	6.58	84.84
2/12/2024 21:00	10.14	NoData	19.21	7.59	7.45	14.41	16.84	13.68	16.17	6.52	84.84
2/12/2024 20:00	7.56	NoData	6.13	5.4	5.42	6.3	5.34	6.74	5.56	6.49	84.84
2/12/2024 19:00	7.59	NoData	6.22	5.48	5.5	6.4	5.44	6.83	5.64	6.44	84.84
2/12/2024 18:00	7.73	NoData	6.24	5.5	5.52	6.41	5.45	6.85	5.65	6.44	84.86
2/12/2024 17:00	8.06	NoData	6.24	5.5	5.53	6.42	5.46	6.85	5.66	6.4	84.84
2/12/2024 16:00	8.15	NoData	6.19	5.43	5.45	6.35	5.37	6.8	5.6	6.38	84.84
2/12/2024 15:00	8.25	NoData	6.19	5.46	5.46	6.37	5.39	6.81	5.6	6.32	84.83
2/12/2024 14:00	8.05	NoData	6.26	5.51	5.53	6.42	5.46	6.87	5.66	6.28	84.85
2/12/2024 13:00	7.98	NoData	6.27	5.52	5.54	6.42	5.46	6.88	5.66	6.3	84.85
2/12/2024 12:00	8.14	NoData	6.27	5.52	5.54	6.44	5.46	6.88	5.66	6.3	84.86
2/12/2024 11:00	8.13	NoData	6.27	5.53	5.54	6.43	5.47	6.88	5.66	6.3	84.85
2/12/2024 10:00	8.1	NoData	6.19	5.4	5.43	6.32	5.37	6.74	5.56	6.21	84.88
2/12/2024 9:00	7.92	NoData	5.76	5	5.02	5.94	4.95	6.38	5.14	5.78	84.87
2/12/2024 8:00	8.05	NoData	5.7	4.95	4.97	5.88	4.88	6.33	5.08	5.71	84.88
2/12/2024 7:00	7.88	NoData	5.7	4.95	4.98	5.89	4.89	6.33	5.09	5.73	84.88
2/12/2024 6:00	7.85	NoData	5.74	4.99	5.01	5.92	4.91	6.37	5.12	5.76	84.83
2/12/2024 5:00	8.06	NoData	5.74	5	5.02	5.92	4.95	6.37	5.13	5.77	84.84
2/12/2024 4:00	8.1	NoData	5.77	5.02	5.04	5.95	4.95	6.39	5.17	5.81	84.83
2/12/2024 3:00	8.13	NoData	5.78	5.03	5.05	5.95	4.97	6.41	5.17	5.81	84.83
2/12/2024 2:00	8.05	NoData	5.8	5.05	5.07	5.98	4.99	6.41	5.18	5.81	84.85
2/12/2024 1:00	8.23	NoData	5.82	5.06	5.08	5.98	5	6.44	5.22	5.86	84.83
2/12/2024 0:00	8.22	NoData	5.82	5.08	5.1	6.01	5.03	6.45	5.22	5.86	84.85
2/11/2024 23:00	8.31	NoData	5.86	5.1	5.12	6.02	5.03	6.45	5.23	5.87	84.84
2/11/2024 22:00	8.39	NoData	5.85	5.12	5.14	6.04	5.07	6.49	5.27	5.91	84.85
2/11/2024 21:00	8.23	NoData	5.89	5.14	5.15	6.06	5.07	6.49	5.27	5.91	84.84
2/11/2024 20:00	8.33	NoData	5.89	5.15	5.17	6.07	5.11	6.53	5.31	5.94	84.85
2/11/2024 19:00	8.56	NoData	5.93	5.17	5.19	6.1	5.11	6.53	5.32	5.96	84.85
2/11/2024 18:00	8.64	NoData	5.93	5.19	5.2	6.1	5.13	6.56	5.32	5.96	84.85
2/11/2024 17:00	8.54	NoData	5.93	5.2	5.22	6.13	5.15	6.58	5.33	5.96	84.86
2/11/2024 16:00	8.53	NoData	5.96	5.2	5.22	6.13	5.15	6.58	5.37	5.97	84.85
2/11/2024 15:00	8.69	NoData	5.97	5.2	5.22	6.13	5.15	6.58	5.37	5.97	84.86
2/11/2024 14:00	8.6	NoData	5.95	5.2	5.21	6.13	5.15	6.58	5.34	5.96	84.85
2/11/2024 13:00	8.64	NoData	5.93	5.19	5.21	6.12	5.13	6.58	5.32	5.96	84.86
2/11/2024 12:00	8.62	NoData	5.93	5.18	5.19	6.1	5.11	6.57	5.32	5.96	84.85
2/11/2024 11:00	8.57	NoData	5.92	5.16	5.18	6.1	5.11	6.53	5.32	5.96	84.86
2/11/2024 10:00	8.75	NoData	5.89	5.16	5.18	6.1	5.11	6.53	5.32	5.95	84.84
2/11/2024 9:00	8.68	NoData	5.89	5.16	5.18	6.09	5.11	6.53	5.32	5.95	84.84

Data Table 2_hourly

Timestamps	ro ait 2109 ph.output_v alue	ro pit 2001.output _value	ro pit 2100.output _value	ro pit 2101.output _value	ro pit 2102.output _value	ro pit 2103.output _value	ro pit 2104.output _value	ro pit 2105.output _value	ro pit 2106.output _value	ro pit 2107.output _value	ro pit 2200.output _value
2/11/2024 8:00	8.53	NoData	5.93	5.18	5.2	6.09	5.11	6.54	5.31	5.95	84.82
2/11/2024 7:00	8.53	NoData	5.93	5.2	5.22	6.11	5.14	6.57	5.35	5.97	84.84
2/11/2024 6:00	8.49	NoData	5.97	5.23	5.25	6.15	5.18	6.6	5.37	6	84.82
2/11/2024 5:00	8.5	NoData	6.01	5.26	5.29	6.18	5.21	6.63	5.41	6.05	84.83
2/11/2024 4:00	8.55	NoData	6.04	5.3	5.32	6.21	5.24	6.66	5.45	6.07	84.83
2/11/2024 3:00	8.62	NoData	6.07	5.33	5.35	6.25	5.28	6.69	5.48	6.12	84.83
2/11/2024 2:00	8.86	NoData	6.1	5.37	5.39	6.27	5.31	6.72	5.51	6.15	84.84
2/11/2024 1:00	8.84	NoData	6.12	5.38	5.4	6.3	5.34	6.72	5.51	6.15	84.83
2/11/2024 0:00	8.78	NoData	6.13	5.39	5.4	6.3	5.34	6.72	5.55	6.15	84.85
2/10/2024 23:00	8.97	NoData	6.13	5.39	5.4	6.3	5.34	6.73	5.56	6.15	84.83
2/10/2024 22:00	8.97	NoData	6.13	5.39	5.41	6.3	5.34	6.74	5.56	6.15	84.85

Data Table 2_hourly

Timestamps	ro tit 2100.output ut_value	st1_dp.outp ut_value	st1_fx.outp ut_value	st2_op_dp.o utput_value	st2_fx.outp ut_value	st3_dp.outp ut_value	st3_fx.outp ut_value
2/19/2024 20:00	69.63	-0.13	-0.01	-1.19	0	-0.65	0
2/19/2024 19:00	69.87	-0.12	-0.01	-1.22	0	-0.68	0
2/19/2024 18:00	70.11	-0.11	0.01	-1.17	0.01	-0.62	0
2/19/2024 17:00	70.19	15.48	10.52	11.36	9.89	13.29	8.63
2/19/2024 16:00	70.05	18.05	13.27	12.18	11.84	16.18	8.68
2/19/2024 15:00	70.11	7.98	4.56	6.08	5.18	8.35	3.96
2/19/2024 14:00	69.72	0.68	7.03	-0.37	0.24	0.32	0.2
2/19/2024 13:00	69.91	2.68	8.71	1.11	2.27	2.2	1.24
2/19/2024 12:00	70.08	18.1	13.25	12.21	11.86	15.85	8.74
2/19/2024 11:00	69.84	11.58	7.6	7.96	7.39	11.35	6.09
2/19/2024 10:00	70.56	0.01	0.1	-1.04	0.14	-0.47	0.05
2/19/2024 9:00	70.39	15.26	10.4	10.79	9.28	14.14	6.75
2/19/2024 8:00	70.33	18.24	13.24	12.31	11.92	16.18	8.74
2/19/2024 7:00	70.36	18.6	13.33	12.4	12.11	15.18	9.55
2/19/2024 6:00	70.4	18.2	13.27	12.59	12.25	15.63	9.85
2/19/2024 5:00	70.44	18.19	13.24	12.12	11.82	16.39	8.69
2/19/2024 4:00	70.49	18.13	13.24	12.24	11.84	16.27	8.77
2/19/2024 3:00	70.54	18.34	13.25	12.14	11.89	15.67	8.65
2/19/2024 2:00	70.56	18.22	13.25	12.21	11.86	15.91	8.63
2/19/2024 1:00	70.57	18.11	13.27	12.17	11.92	16.05	8.7
2/19/2024 0:00	70.52	18.17	13.26	12.21	11.88	15.96	8.73
2/18/2024 23:00	70.46	18.19	13.25	12.25	11.84	15.99	8.71
2/18/2024 22:00	70.43	18.4	13.27	12.19	11.94	15.54	8.71
2/18/2024 21:00	70.47	18.05	13.24	12.28	11.88	16.35	8.74
2/18/2024 20:00	70.49	18.31	13.24	12.63	12.36	15.54	10.35
2/18/2024 19:00	70.48	18.33	13.36	12.35	12.11	15.48	9.01
2/18/2024 18:00	70.56	18.42	13.23	12.16	11.89	15.49	8.74
2/18/2024 17:00	70.71	18.11	13.25	12.22	11.91	16.04	8.72
2/18/2024 16:00	70.89	18.13	13.24	12.18	11.94	15.9	8.77
2/18/2024 15:00	71.01	18.1	13.26	12.18	11.84	16.25	8.67
2/18/2024 14:00	71.06	18.17	13.24	12.19	11.85	16.12	8.72
2/18/2024 13:00	71.05	18.2	13.24	12.16	11.9	15.91	8.69
2/18/2024 12:00	71.01	18.02	13.24	12.21	11.88	16.23	8.68
2/18/2024 11:00	71.01	18.14	13.23	12.19	11.89	16.05	8.75
2/18/2024 10:00	70.89	18.07	13.22	12.31	11.91	16.66	8.79
2/18/2024 9:00	70.82	18.26	13.36	12.66	12.49	15.2	10.58
2/18/2024 8:00	70.75	17.91	13.24	12.34	11.89	16.54	8.73
2/18/2024 7:00	70.72	18.11	13.24	12.17	11.88	16.22	8.74
2/18/2024 6:00	68.78	8.04	4.5	4.91	5.18	8.07	1.95
2/18/2024 5:00	67.86	-0.16	0.4	-1.62	0	-0.93	-1.97
2/18/2024 4:00	68.04	-0.16	0.4	-1.61	0	-0.91	-1.93
2/18/2024 3:00	68.23	-0.16	0.39	-1.62	0	-0.93	-1.9
2/18/2024 2:00	68.44	-0.16	0.38	-1.61	0	-0.88	-1.86
2/18/2024 1:00	68.66	-0.15	0.37	-1.6	0	-0.85	-1.79
2/18/2024 0:00	68.9	-0.16	0.14	-1.6	0	-0.73	-0.72
2/17/2024 23:00	69.14	-0.16	-0.01	-1.6	0	-0.69	0
2/17/2024 22:00	69.37	-0.17	-0.01	-1.61	0	-0.71	0
2/17/2024 21:00	69.59	-0.16	-0.01	-1.58	0	-0.69	0
2/17/2024 20:00	69.85	-0.16	-0.01	-1.54	0	-0.67	0
2/17/2024 19:00	70.11	-0.16	-0.01	-1.52	0	-0.67	0
2/17/2024 18:00	70.39	-0.16	-0.01	-1.52	0	-0.67	0

Data Table 2_hourly

Timestamps	ro tit 2100.output ut_value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/17/2024 17:00	70.71	-0.16	-0.01	-1.49	0	-0.66	0
2/17/2024 16:00	71	-0.15	-0.01	-1.34	0	-0.66	0
2/17/2024 15:00	71.03	11.43	7.67	8.2	7.23	11.44	4.51
2/17/2024 14:00	70.95	16.79	12.28	12.25	11.71	16.01	9.79
2/17/2024 13:00	70.7	1.85	5.58	1.47	0.75	1.82	0.95
2/17/2024 12:00	70.72	13.87	10.32	9.59	10.28	11.91	7.92
2/17/2024 11:00	70.68	18.22	13.25	12.23	11.91	15.84	8.75
2/17/2024 10:00	69.34	10.66	6.54	6.87	7	10.32	4.95
2/17/2024 9:00	67.94	-0.16	-0.01	-1.36	0	-0.66	0
2/17/2024 8:00	68.1	-0.16	-0.01	-1.35	0	-0.66	0
2/17/2024 7:00	68.23	-0.16	-0.01	-1.34	0	-0.65	0
2/17/2024 6:00	68.37	-0.16	-0.01	-1.34	0	-0.66	0
2/17/2024 5:00	68.54	-0.16	-0.01	-1.33	0	-0.66	0
2/17/2024 4:00	68.76	-0.16	-0.01	-1.32	0	-0.65	0
2/17/2024 3:00	68.99	-0.16	-0.01	-1.31	0	-0.66	0
2/17/2024 2:00	69.23	-0.15	-0.01	-1.3	0	-0.65	0
2/17/2024 1:00	69.45	-0.15	-0.01	-1.3	0	-0.66	0
2/17/2024 0:00	69.71	-0.15	-0.01	-1.29	0	-0.66	0
2/16/2024 23:00	70.01	-0.15	-0.01	-1.28	0	-0.65	0
2/16/2024 22:00	70.35	-0.15	-0.01	-1.27	0	-0.64	0
2/16/2024 21:00	70.67	-0.16	-0.01	-1.27	0	-0.64	0
2/16/2024 20:00	70.97	-0.16	-0.01	-1.27	0	-0.64	0
2/16/2024 19:00	71.13	9.2	6.16	6.73	6.22	9.23	4.77
2/16/2024 18:00	70.92	18.05	13.25	12.13	11.94	16.39	8.72
2/16/2024 17:00	70.9	16.5	11.28	11.42	10.81	15.32	8.71
2/16/2024 16:00	70.23	-0.13	-0.01	-1.27	0	-0.64	0
2/16/2024 15:00	70.55	-0.14	-0.01	-1.27	0	-0.64	0
2/16/2024 14:00	70.86	-0.15	-0.01	-1.29	0	-0.65	0
2/16/2024 13:00	68.53	2.42	0.66	1.74	0.81	2.13	0.65
2/16/2024 12:00	65.57	-0.13	-0.01	-1.31	0	-0.64	0
2/16/2024 11:00	65.43	-0.15	-0.01	-1.31	0	-0.64	0
2/16/2024 10:00	65.3	-0.17	-0.01	-1.29	0	-0.64	0
2/16/2024 9:00	65.26	-0.17	-0.01	-1.27	0	-0.64	0
2/16/2024 8:00	65.32	-0.17	-0.01	-1.27	0	-0.64	0
2/16/2024 7:00	65.54	-0.17	-0.01	-1.27	0	-0.64	0
2/16/2024 6:00	65.8	-0.17	-0.01	-1.28	0	-0.64	0
2/16/2024 5:00	66.09	-0.17	-0.01	-1.31	0	-0.64	0
2/16/2024 4:00	66.42	-0.16	-0.01	-1.31	0	-0.64	0
2/16/2024 3:00	66.77	-0.16	-0.01	-1.31	0	-0.64	0
2/16/2024 2:00	67.15	-0.16	-0.01	-1.31	0	-0.64	0
2/16/2024 1:00	67.56	-0.17	-0.01	-1.31	0	-0.64	0
2/16/2024 0:00	67.98	-0.17	-0.01	-1.31	0	-0.64	0
2/15/2024 23:00	68.4	-0.16	-0.01	-1.31	0	-0.64	0
2/15/2024 22:00	68.84	-0.16	-0.01	-1.31	0	-0.64	0
2/15/2024 21:00	69.33	-0.17	-0.01	-1.31	0	-0.64	0
2/15/2024 20:00	69.81	-0.17	-0.01	-1.31	0	-0.64	0
2/15/2024 19:00	70.31	-0.17	-0.01	-1.31	0	-0.64	0
2/15/2024 18:00	70.81	-0.16	-0.01	-1.31	0	-0.64	0
2/15/2024 17:00	70.99	2.13	2.97	1.62	0.72	1.89	0.96
2/15/2024 16:00	70.75	-0.15	8.12	-1.43	0	-0.65	-0.01
2/15/2024 15:00	71.15	12.75	11.73	8.36	8.68	11.4	5.81

Data Table 2_hourly

Timestamps	ro tit 2100.output ut_value	st1_dp.outp ut_value	st1_fx.outp ut_value	st2_op_dp.o utput_value	st2_fx.outp ut_value	st3_dp.outp ut_value	st3_fx.outp ut_value
2/15/2024 14:00	71.26	17.91	13.24	12.55	12.3	15.59	10.07
2/15/2024 13:00	71.1	9.42	8.43	7.31	6.53	10.2	5.16
2/15/2024 12:00	71.02	17.1	12.54	11.85	11.36	16.89	8.13
2/15/2024 11:00	70.91	14.94	12.2	10.3	10.91	11.85	8.42
2/15/2024 10:00	70.86	17.94	13.26	12.15	11.84	16.02	8.77
2/15/2024 9:00	69.61	8.67	5.52	6.62	6.03	10.17	4.4
2/15/2024 8:00	68.99	-0.19	-0.01	-1.4	0	-0.65	0
2/15/2024 7:00	69.62	-0.16	-0.01	-1.31	0	-0.65	0
2/15/2024 6:00	70.01	-0.16	-0.01	-1.32	0	-0.67	0
2/15/2024 5:00	70.11	-0.16	-0.01	-1.31	0	-0.67	0
2/15/2024 4:00	70.22	-0.16	-0.01	-1.32	0	-0.67	0
2/15/2024 3:00	70.34	-0.16	-0.01	-1.34	0	-0.67	0
2/15/2024 2:00	70.49	-0.16	-0.01	-1.34	0	-0.64	0
2/15/2024 1:00	70.65	-0.16	-0.01	-1.33	0	-0.63	0
2/15/2024 0:00	70.82	-0.16	-0.01	-1.32	0	-0.64	0
2/14/2024 23:00	70.83	13.85	9	10.25	8.64	11.98	7.71
2/14/2024 22:00	70.8	18.08	13.25	12.18	11.87	16.04	8.69
2/14/2024 21:00	70.85	17.97	13.26	12.19	11.89	16.17	8.72
2/14/2024 20:00	70.71	18.04	13.25	12.25	11.84	16.13	8.74
2/14/2024 19:00	70.59	18.02	13.24	12.23	11.8	16.46	8.7
2/14/2024 18:00	70.78	17.04	11.98	12.1	11.42	15.44	9.63
2/14/2024 17:00	71.1	11.55	8.51	9.24	7.8	10.7	6.63
2/14/2024 16:00	71.3	4.19	2.82	4.06	2.36	6.03	1.97
2/14/2024 15:00	71.22	14.28	9.09	10.06	8.93	12.84	7.34
2/14/2024 14:00	71.38	12.42	8.23	8.97	7.72	12.47	6.08
2/14/2024 13:00	71.25	18	13.29	12.29	12.2	15.19	9.62
2/14/2024 12:00	71.16	11.02	6.91	9.06	7.19	12.7	6.04
2/14/2024 11:00	70.78	4.24	8.57	2.73	3.37	5.07	2.16
2/14/2024 10:00	70.72	6.94	9.55	4.32	5.09	8.28	1.79
2/14/2024 9:00	70.81	18.26	13.33	12.65	12.51	15.04	10.62
2/14/2024 8:00	70.63	6.68	4.52	5.49	3.69	8.66	2.26
2/14/2024 7:00	70.54	18.37	13.25	12.64	12.35	15.16	10.41
2/14/2024 6:00	70.63	18	13.33	12.33	11.99	15.76	8.97
2/14/2024 5:00	70.73	18.12	13.23	12.16	11.82	15.99	8.77
2/14/2024 4:00	70.73	17.99	13.23	12.24	11.83	16.18	8.68
2/14/2024 3:00	70.71	18.18	13.22	12.18	11.82	15.75	8.71
2/14/2024 2:00	70.71	18.03	13.23	12.2	11.87	15.94	8.67
2/14/2024 1:00	70.69	17.93	13.25	12.23	11.94	16.26	8.73
2/14/2024 0:00	70.68	17.97	13.25	12.19	11.87	16.23	8.71
2/13/2024 23:00	70.71	17.99	13.24	12.26	11.91	15.98	8.72
2/13/2024 22:00	70.76	18.22	13.25	12.17	11.93	15.59	8.75
2/13/2024 21:00	70.83	17.93	13.35	12.29	11.96	16.02	8.8
2/13/2024 20:00	70.9	18.11	13.27	12.63	12.4	15.11	10.51
2/13/2024 19:00	70.99	17.9	13.24	12.27	11.87	16.19	8.8
2/13/2024 18:00	71.07	18.18	13.26	12.13	11.89	15.72	8.68
2/13/2024 17:00	71.13	17.95	13.25	12.22	11.94	16.26	8.75
2/13/2024 16:00	71.16	17.93	13.23	12.16	11.87	16.2	8.71
2/13/2024 15:00	71.05	18.05	13.24	12.2	11.88	16.12	8.7
2/13/2024 14:00	71.1	18.13	13.24	12.19	11.82	16.04	8.75
2/13/2024 13:00	71.05	18.15	13.25	12.14	11.89	16.02	8.76
2/13/2024 12:00	71.01	17.88	13.25	12.22	11.82	16.56	8.76

Data Table 2_hourly

Timestamps	ro tit 2100.output ut_value	st1_dp.outp ut_value	st1_fx.outp ut_value	st2_op_dp.o utput_value	st2_fx.outp ut_value	st3_dp.outp ut_value	st3_fx.outp ut_value
2/13/2024 11:00	70.9	18.03	13.23	12.16	11.84	16.17	8.79
2/13/2024 10:00	70.72	18.04	13.26	12.68	12.24	16.76	10.05
2/13/2024 9:00	70.77	18.23	13.33	12.25	12.11	15.36	9.36
2/13/2024 8:00	70.47	5.99	5.69	5.37	4.53	20.89	3.21
2/13/2024 7:00	68.57	3.02	1.51	2.56	1.66	13.58	1.57
2/13/2024 6:00	65.83	-0.17	-0.01	-1.35	0	-0.98	0.01
2/13/2024 5:00	66.15	-0.16	-0.01	-1.35	0	-0.98	0.01
2/13/2024 4:00	66.56	-0.16	-0.01	-1.35	0	-0.98	0.01
2/13/2024 3:00	67.06	-0.16	-0.01	-1.36	0	-0.98	0.01
2/13/2024 2:00	67.61	-0.15	-0.01	-1.36	0	-0.98	0.01
2/13/2024 1:00	68.01	-0.15	-0.01	-1.37	0	-0.98	0.01
2/13/2024 0:00	68.61	-0.15	-0.01	-1.35	0	-0.95	0.02
2/12/2024 23:00	69.3	-0.15	-0.01	-1.37	0	-0.93	0.01
2/12/2024 22:00	70.08	-0.15	-0.01	-1.38	0	-0.89	0.01
2/12/2024 21:00	68.92	2.35	0.59	1.85	0.87	8.12	1.33
2/12/2024 20:00	66.34	-0.17	-0.01	-1.4	0	-0.93	0
2/12/2024 19:00	66.93	-0.17	-0.01	-1.4	0	-0.81	0.01
2/12/2024 18:00	67.01	-0.17	-0.01	-1.39	0	-0.79	0.01
2/12/2024 17:00	66.98	-0.17	-0.01	-1.39	0	-0.75	0.01
2/12/2024 16:00	66.76	-0.16	-0.01	-1.42	0	-0.8	0.01
2/12/2024 15:00	67.04	-0.16	-0.01	-1.41	0	-0.72	0
2/12/2024 14:00	66.99	-0.16	-0.01	-1.41	0	-0.62	0.01
2/12/2024 13:00	66.73	-0.15	-0.01	-1.42	0	-0.63	0.01
2/12/2024 12:00	66.44	-0.16	-0.01	-1.42	0	-0.64	0.01
2/12/2024 11:00	66.12	-0.16	-0.01	-1.4	0	-0.64	0.01
2/12/2024 10:00	65.73	-0.17	-0.01	-1.4	0	-0.63	0.01
2/12/2024 9:00	65.56	-0.17	-0.01	-1.44	0	-0.63	0
2/12/2024 8:00	65.51	-0.18	-0.01	-1.45	0	-0.63	0
2/12/2024 7:00	65.52	-0.19	-0.01	-1.44	0	-0.64	0
2/12/2024 6:00	65.6	-0.18	-0.01	-1.45	0	-0.64	0
2/12/2024 5:00	65.7	-0.18	-0.01	-1.42	0	-0.64	0
2/12/2024 4:00	65.8	-0.17	-0.01	-1.44	0	-0.64	0
2/12/2024 3:00	65.9	-0.17	-0.01	-1.44	0	-0.64	0
2/12/2024 2:00	66	-0.18	-0.01	-1.42	0	-0.63	0
2/12/2024 1:00	66.09	-0.16	-0.01	-1.44	0	-0.64	0
2/12/2024 0:00	66.19	-0.19	-0.01	-1.42	0	-0.64	0.01
2/11/2024 23:00	66.27	-0.16	-0.01	-1.42	0	-0.63	0.01
2/11/2024 22:00	66.35	-0.18	-0.01	-1.42	0	-0.64	0.01
2/11/2024 21:00	66.42	-0.17	-0.01	-1.42	0	-0.64	0.01
2/11/2024 20:00	66.48	-0.18	-0.01	-1.42	0	-0.63	0.01
2/11/2024 19:00	66.54	-0.17	-0.01	-1.42	0	-0.64	0
2/11/2024 18:00	66.59	-0.17	-0.01	-1.43	0	-0.64	0
2/11/2024 17:00	66.64	-0.19	-0.01	-1.43	0	-0.63	0
2/11/2024 16:00	66.65	-0.17	-0.01	-1.43	0	-0.6	0
2/11/2024 15:00	66.66	-0.15	-0.01	-1.43	0	-0.6	0
2/11/2024 14:00	66.64	-0.18	-0.01	-1.43	0	-0.62	0
2/11/2024 13:00	66.62	-0.19	-0.01	-1.44	0	-0.64	0
2/11/2024 12:00	66.6	-0.17	-0.01	-1.46	0	-0.64	0
2/11/2024 11:00	66.57	-0.18	-0.01	-1.42	0	-0.64	0
2/11/2024 10:00	66.54	-0.2	-0.01	-1.42	0	-0.64	0
2/11/2024 9:00	66.56	-0.2	-0.01	-1.42	0	-0.64	0

Data Table 2_hourly

Timestamps	ro tit 2100.output _value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/11/2024 8:00	66.63	-0.17	-0.01	-1.43	0	-0.64	0
2/11/2024 7:00	66.74	-0.18	-0.01	-1.42	0	-0.63	0.01
2/11/2024 6:00	66.9	-0.17	-0.01	-1.42	0	-0.63	0.02
2/11/2024 5:00	67.08	-0.17	-0.01	-1.42	0	-0.64	0.01
2/11/2024 4:00	67.25	-0.18	-0.01	-1.42	0	-0.63	0.01
2/11/2024 3:00	67.43	-0.18	-0.01	-1.41	0	-0.63	0
2/11/2024 2:00	67.63	-0.18	-0.01	-1.41	0	-0.64	0
2/11/2024 1:00	67.81	-0.18	-0.01	-1.39	0	-0.64	0
2/11/2024 0:00	68.02	-0.17	-0.01	-1.39	0	-0.59	0
2/10/2024 23:00	68.22	-0.17	-0.01	-1.39	0	-0.59	0
2/10/2024 22:00	68.42	-0.17	-0.01	-1.41	0	-0.59	0

Data Table 3_hourly

Timestamps	ro ait 3101 ec.output_v alue	ro ait 3102 ec.output_v alue	ro ait 3103 ec.output_v alue	ro ait 3104 ec.output_v alue	ro ait 3109 ec.output_v alue	ro fit 3100.output _value	ro fit 3102.output _value	ro fit 3103.output _value	ro fit 3104.output _value	ro fit 3105.output _value	ro ait 3101 ph.output_v alue
2/19/2024 20:00	29.42	26.01	24.93	23.34	2996.19	-0.31	-0.68	0.06	-0.03	-0.2	5.41
2/19/2024 19:00	32.76	31.84	39.85	24.58	2994.85	1096.54	280.94	152.07	224.85	288.61	5.41
2/19/2024 18:00	29.4	28.22	31.89	23.11	2993.56	1691.99	475.83	232.34	194.04	367.34	5.41
2/19/2024 17:00	161.48	51.69	40.34	31.68	2993.62	409.46	84.24	45.08	65.03	73.02	5.41
2/19/2024 16:00	143.46	62.68	47.2	46.54	2999.31	-0.31	-0.66	0.13	-0.03	-0.11	5.41
2/19/2024 15:00	87.23	64.72	59.13	47.29	3002.08	84.28	12.26	13.52	112.04	98.2	5.41
2/19/2024 14:00	35.28	32.81	38.76	28.67	3007.32	-0.33	-0.68	0.06	-0.04	-0.29	5.4
2/19/2024 13:00	34.63	32.25	37.98	27.89	3007.4	594.48	111.43	52.8	51.31	73	5.4
2/19/2024 12:00	38.36	36.14	40.61	30.41	3007.75	1526.29	407.53	214.8	206.76	346.81	5.39
2/19/2024 11:00	38.76	36.66	40.29	30.57	3018.24	1032.94	255.94	130.43	172.21	257.93	5.39
2/19/2024 10:00	37.53	36.09	39.06	26.25	3097.29	1253.75	320.59	163.42	191.58	296.94	5.39
2/19/2024 9:00	43.85	48.73	34.52	22.33	3105.25	-0.37	-0.69	0.05	-0.05	-0.19	5.39
2/19/2024 8:00	43.85	48.73	34.52	22.33	3105.81	-0.37	-0.69	0.05	-0.05	-0.19	5.39
2/19/2024 7:00	43.85	48.73	34.52	22.33	3107	-0.36	-0.69	0.06	-0.05	-0.2	5.4
2/19/2024 6:00	43.84	48.73	34.52	22.32	3108.21	-0.35	-0.69	0.06	-0.04	-0.19	5.4
2/19/2024 5:00	43.84	48.72	34.52	22.32	3110.12	-0.35	-0.69	0.06	-0.04	-0.18	5.41
2/19/2024 4:00	43.85	48.74	34.52	22.32	3110.78	-0.35	-0.69	0.06	-0.04	-0.18	5.41
2/19/2024 3:00	43.84	48.74	34.52	22.32	3112.19	-0.34	-0.69	0.06	-0.04	-0.19	5.41
2/19/2024 2:00	43.83	48.74	34.51	22.31	3112.95	-0.34	-0.69	0.06	-0.04	-0.21	5.41
2/19/2024 1:00	43.83	48.74	34.51	22.31	3113.7	-0.33	-0.69	0.06	-0.04	-0.2	5.42
2/19/2024 0:00	43.83	48.75	34.51	22.31	3114.24	-0.33	-0.69	0.06	-0.04	-0.21	5.42
2/18/2024 23:00	43.83	48.75	34.51	22.3	3114.3	-0.32	-0.69	0.06	-0.04	-0.2	5.42
2/18/2024 22:00	43.83	48.76	34.51	22.3	3114.24	-0.32	-0.68	0.06	-0.04	-0.2	5.43
2/18/2024 21:00	43.83	48.76	34.51	22.3	3113.94	-0.31	-0.68	0.06	-0.03	-0.21	5.43
2/18/2024 20:00	43.83	48.77	34.51	22.3	3113.66	-0.31	-0.68	0.06	-0.03	-0.21	5.43
2/18/2024 19:00	43.84	48.78	34.51	22.3	3112.57	-0.31	-0.68	0.06	-0.03	-0.21	5.43
2/18/2024 18:00	43.86	48.83	34.52	22.3	3111.65	-0.3	-0.68	0.06	-0.03	-0.19	5.43
2/18/2024 17:00	43.87	48.89	34.52	22.29	3111.72	-0.31	-0.68	0.06	-0.03	-0.19	5.43
2/18/2024 16:00	43.87	48.92	34.33	22.31	3113.76	-0.3	-0.68	0.06	-0.03	-0.19	5.44
2/18/2024 15:00	43.9	48.83	34.31	22.31	3117.26	-0.3	-0.68	0.06	-0.03	-0.19	5.44
2/18/2024 14:00	43.96	48.17	34.31	22.31	3121.02	-0.3	-0.68	0.06	-0.03	-0.19	5.44
2/18/2024 13:00	43.54	49.96	34.29	22.29	3127.54	-0.3	-0.68	0.06	-0.03	-0.18	5.45
2/18/2024 12:00	45.18	49.32	34.29	22.27	3134.88	-0.3	-0.68	0.06	-0.03	-0.19	5.45
2/18/2024 11:00	68.21	53.8	34.24	22.24	3142.47	-0.31	-0.68	0.06	-0.03	-0.17	5.45
2/18/2024 10:00	83.97	46.98	34.21	22.24	3150.48	-0.32	-0.69	0.06	-0.04	-0.26	5.45
2/18/2024 9:00	73.91	39.21	34.18	22.21	3154.27	-0.34	-0.69	0.06	-0.04	-0.24	5.46
2/18/2024 8:00	68.06	39.06	34.27	25.11	3153.3	-0.34	-0.66	0.09	-0.04	-0.15	5.46
2/18/2024 7:00	79.43	42.7	37.66	34.57	3151.95	-0.33	-0.68	0.06	-0.03	-0.16	5.47
2/18/2024 6:00	54.85	54.5	55.62	37.55	3170.19	100.12	15.92	16.05	115.53	99.03	5.48
2/18/2024 5:00	30.54	29.78	37.96	24.29	3167.85	1430.16	366.76	180.59	162.19	268.24	5.49
2/18/2024 4:00	31.98	30.52	36.53	24.28	3127.3	1651.83	457.18	230.79	201.15	355.84	5.5
2/18/2024 3:00	33.86	30.58	36.66	24.21	3116.99	1651.94	456.05	231.74	202	356.23	5.5
2/18/2024 2:00	32.2	30.35	36.29	24.12	3109.64	1650.19	456.01	231.67	201.43	356.56	5.5
2/18/2024 1:00	29.32	30.08	36.08	24.06	3103.44	1650.7	456.85	230.73	201.68	355.32	5.5
2/18/2024 0:00	30.95	30.16	36.28	24.18	3090.23	1651.72	456.82	229.41	201.29	356.16	5.5
2/17/2024 23:00	31.68	30.12	36.16	24.25	3076.16	1649.77	454.59	229.39	202.34	355.24	5.49
2/17/2024 22:00	34.89	30.45	36.14	24.07	3062.23	1687.2	473.21	233.66	195.97	367.37	5.48
2/17/2024 21:00	28.54	29.89	34.43	24.03	3050.56	1673.21	462.53	233.12	195.67	353.83	5.46
2/17/2024 20:00	31.21	30.63	37.04	24.35	3025.97	1650.47	454.31	230.13	201.53	356.17	5.44
2/17/2024 19:00	31.34	30.23	36.68	24.25	3002.3	1650.53	454.37	229.48	202.42	357.59	5.4
2/17/2024 18:00	33.41	30.58	36.72	24.24	2979.88	1650.19	454.44	230.2	201.62	355.36	5.35

Data Table 3_hourly

Timestamps	ro ait 3101 ec.output_v alue	ro ait 3102 ec.output_v alue	ro ait 3103 ec.output_v alue	ro ait 3104 ec.output_v alue	ro ait 3109 ec.output_v alue	ro fit 3100.output _value	ro fit 3102.output _value	ro fit 3103.output _value	ro fit 3104.output _value	ro fit 3105.output _value	ro ait 3101 ph.output_v alue
2/17/2024 17:00	30.95	30.48	36.48	24.2	2991.21	1650.58	456.36	231.33	201.75	355.8	5.28
2/17/2024 16:00	29.84	30.36	36.39	24.21	3036.51	1650.85	457	230.31	201.84	356.57	5.26
2/17/2024 15:00	31.04	30.28	36.15	24.41	3033.89	1650.83	456.84	229.35	201.95	355.54	5.25
2/17/2024 14:00	30.86	29.6	32.8	22.64	3035.55	1650.13	454.36	228.63	202.17	355.68	5.25
2/17/2024 13:00	31.8	30.21	32.16	21.8	3037.75	1626.65	455.54	223.95	198.64	370.16	5.25
2/17/2024 12:00	38.13	30.13	31.8	20.31	3041.84	5.92	0.19	1.02	2.54	2.1	5.26
2/17/2024 11:00	38.12	30.11	31.65	20.29	3060.95	-0.33	-0.69	0.06	-0.04	-0.21	5.27
2/17/2024 10:00	38.12	30.11	31.57	20.29	3075.74	-0.33	-0.69	0.06	-0.04	-0.22	5.27
2/17/2024 9:00	38.14	30.11	31.49	20.3	3083.25	-0.34	-0.69	0.06	-0.04	-0.21	5.27
2/17/2024 8:00	38.14	30.11	31.47	20.29	3081.76	-0.34	-0.69	0.06	-0.04	-0.2	5.27
2/17/2024 7:00	38.14	30.11	31.31	20.28	3080.91	-0.34	-0.69	0.06	-0.04	-0.22	5.27
2/17/2024 6:00	38.15	30.1	31.26	20.28	3084.36	-0.34	-0.69	0.06	-0.04	-0.21	5.27
2/17/2024 5:00	38.16	30.1	31.23	20.28	3084.45	-0.34	-0.69	0.06	-0.04	-0.19	5.27
2/17/2024 4:00	38.17	30.11	31.22	20.28	3082.68	-0.33	-0.69	0.06	-0.04	-0.2	5.26
2/17/2024 3:00	38.18	30.12	31.22	20.27	3082.15	-0.33	-0.69	0.06	-0.04	-0.2	5.27
2/17/2024 2:00	38.18	30.13	31.22	20.25	3083.92	-0.32	-0.69	0.06	-0.04	-0.2	5.27
2/17/2024 1:00	38.21	30.16	31.01	20.24	3086.75	-0.32	-0.69	0.06	-0.04	-0.19	5.27
2/17/2024 0:00	38.94	29.64	30.14	20.23	3088.25	-0.32	-0.68	0.06	-0.04	-0.19	5.27
2/16/2024 23:00	40.26	28.96	28.73	20.21	3088.28	-0.31	-0.69	0.06	-0.03	-0.2	5.27
2/16/2024 22:00	41.6	29.04	27.71	20.19	3087.8	-0.31	-0.68	0.06	-0.03	-0.19	5.27
2/16/2024 21:00	42.82	32.07	27.13	20.16	3088.48	-0.3	-0.68	0.06	-0.03	-0.17	5.27
2/16/2024 20:00	44.6	35.75	26.96	20.13	3093.66	-0.29	-0.68	0.06	-0.02	-0.19	5.27
2/16/2024 19:00	48.82	30.63	26.88	20.1	3097.25	-0.29	-0.67	0.07	-0.02	-0.3	5.27
2/16/2024 18:00	41.14	27.29	26.88	20.24	3093.78	-0.28	-0.67	0.16	-0.02	-0.21	5.27
2/16/2024 17:00	35.89	29.45	28.94	22.92	3065.21	63.48	10.18	7.86	52.1	43.96	5.26
2/16/2024 16:00	31.95	32.99	42.16	26.24	3048.84	1419.56	388.59	201.2	234.65	360.43	5.27
2/16/2024 15:00	31.15	30.52	36.5	24.51	3057.4	1650.74	454.44	228.76	202.22	355.82	5.27
2/16/2024 14:00	31.2	30.14	35.98	24.51	3065.11	1657.86	458	229.22	199.44	354.41	5.27
2/16/2024 13:00	31.6	29.87	33.86	24.17	3078.71	1702.04	478.7	232.6	191.86	366.51	5.28
2/16/2024 12:00	33.97	30.59	36.04	24.64	3104.64	1652.52	456.81	230.92	201.62	356.34	5.28
2/16/2024 11:00	32.52	31.07	37.33	24.95	3184.18	1652.59	455.14	228.5	201.7	355.07	5.29
2/16/2024 10:00	32.11	30.63	36.64	24.47	3335.89	1651.27	456.51	229.14	201.76	355.21	5.3
2/16/2024 9:00	34.61	31.07	37.47	24.33	3371.1	1652.05	454.33	230.44	201.85	355.4	5.31
2/16/2024 8:00	33.37	29.93	31.68	24.11	3395.72	1172.7	299.9	149.8	154.26	234.89	5.3
2/16/2024 7:00	31.59	32.61	41.86	24.54	3388.38	1331.25	367.17	187.95	239.92	359.49	5.3
2/16/2024 6:00	30.91	29.46	33.91	23.35	3380.16	1686.83	474.04	230.26	194.51	363.75	5.3
2/16/2024 5:00	29.27	27.61	33.65	21.11	3377.33	1651.62	454.37	229.24	201.75	355.44	5.31
2/16/2024 4:00	32.88	28.72	34.91	22.04	3386.09	1650.65	456.15	230.55	202.41	355.8	5.31
2/16/2024 3:00	28.49	28.52	34.75	22.09	3392.6	1650.59	453.85	230.21	202.46	356.69	5.32
2/16/2024 2:00	28.47	28.64	35	22.12	3399.58	1650.65	455.09	229.55	202.7	355.31	5.32
2/16/2024 1:00	29.85	28.53	34.84	21.97	3409.35	1650.77	456.3	228.83	202.39	355.91	5.33
2/16/2024 0:00	31.77	28.78	35.04	21.98	3415.83	1650.58	454.62	229.79	202.47	355.4	5.33
2/15/2024 23:00	32.05	29.07	35.4	22.25	3434.31	1651.08	456.55	230.89	201.17	355.39	5.32
2/15/2024 22:00	28.92	30.25	36.92	23.55	3461.45	1650.44	455.02	229.86	202.01	354.28	5.31
2/15/2024 21:00	32.27	31.59	38.24	24.8	3491.98	1653.47	455.94	228.95	201.4	355.16	5.29
2/15/2024 20:00	31.94	30.45	35.3	24.56	3525.7	1707.07	480.55	230.93	190.77	366.05	5.29
2/15/2024 19:00	35.67	31.18	37.56	24.36	3557.12	1652.06	454.93	230.82	201.79	356.22	5.3
2/15/2024 18:00	29.76	30.78	37.09	24.47	3585.39	1650.82	456.99	230.1	201.68	354.48	5.29
2/15/2024 17:00	41.31	30.8	31.08	23.24	3602.13	887.59	170.83	82.93	94.03	143.58	5.28
2/15/2024 16:00	51.48	39.16	27.29	20.64	3596.84	-0.28	-0.68	0.07	-0.03	-0.21	5.28
2/15/2024 15:00	54.64	39.65	27.28	20.59	3593.71	-0.25	-0.67	0.07	-0.02	-0.28	5.28

Data Table 3_hourly

Timestamps	ro ait 3101 ec.output_v alue	ro ait 3102 ec.output_v alue	ro ait 3103 ec.output_v alue	ro ait 3104 ec.output_v alue	ro ait 3109 ec.output_v alue	ro fit 3100.output _value	ro fit 3102.output _value	ro fit 3103.output _value	ro fit 3104.output _value	ro fit 3105.output _value	ro ait 3101 ph.output_v alue
2/15/2024 14:00	48.95	27.97	27.23	20.69	3604.46	-0.23	-0.66	0.07	-0.02	-0.23	5.27
2/15/2024 13:00	34.64	33.14	40.66	27.4	3629.02	304.64	53.94	42.47	159.66	141.04	5.26
2/15/2024 12:00	32.08	30.91	36.5	24.96	3705.28	1695.34	476.28	229.82	194.4	367.72	5.26
2/15/2024 11:00	34.81	31.16	36.21	24.71	3810.99	1665.12	461.65	230.75	197.78	353.79	5.27
2/15/2024 10:00	29.89	31.27	37.82	24.65	3967.37	1650.82	456.98	229.69	202.69	356.16	5.29
2/15/2024 9:00	48.69	38.15	40.06	23.29	4355.34	790.38	186.39	89.48	95.48	141.96	5.3
2/15/2024 8:00	47.38	42.88	48.08	30.42	4376.57	381.3	72.72	40.46	108.64	106.11	5.3
2/15/2024 7:00	30.72	29.56	36.09	23.27	4416.72	1649.73	454.87	227.45	202.27	355.44	5.31
2/15/2024 6:00	31.61	30.09	36.16	23.56	4468.92	1651.41	458.55	229.21	201.94	357.09	5.32
2/15/2024 5:00	29.71	29.37	35.9	22.46	4535.5	1650.98	454.38	229.03	201.79	355.86	5.33
2/15/2024 4:00	29.94	29.48	36.21	22.56	4625.07	1651.44	454.17	228.49	201.88	358.54	5.35
2/15/2024 3:00	30	29	35.68	22.39	4750.13	1651.6	454.59	227.62	201.51	355.99	5.38
2/15/2024 2:00	30.43	28.97	35.74	22.36	4920.85	1651.19	456.17	227.85	201.31	354.95	5.44
2/15/2024 1:00	31.54	29.17	35.8	22.18	5135.43	1651.49	458.67	229.25	202.1	355.79	5.53
2/15/2024 0:00	35.43	31.6	34.69	24.53	4093.93	1570.9	434.93	211.56	189.55	345.95	5.86
2/14/2024 23:00	46.21	48.88	33.04	27.11	304.4	-0.32	-0.68	0.06	-0.04	-0.19	6.34
2/14/2024 22:00	46.19	48.87	33.03	27.09	304.83	-0.32	-0.68	0.06	-0.04	-0.19	6.3
2/14/2024 21:00	46.17	48.82	33.02	27.08	301.93	-0.33	-0.68	0.06	-0.03	-0.19	6.26
2/14/2024 20:00	46.47	48.66	33.02	27.06	295.46	-0.31	-0.69	0.06	-0.03	-0.2	6.22
2/14/2024 19:00	46.63	49.37	32.95	27.04	276.9	-0.3	-0.68	0.06	-0.03	-0.19	6.17
2/14/2024 18:00	46.34	46.07	32.98	27.06	257.75	-0.3	-0.68	0.06	-0.03	-0.19	6.1
2/14/2024 17:00	69.22	46.47	32.98	27.03	247.19	-0.3	-0.68	0.06	-0.03	-0.19	6.05
2/14/2024 16:00	101.62	44.81	33.01	27.01	207.66	-0.3	-0.68	0.06	-0.03	-0.21	6
2/14/2024 15:00	100.68	39.54	33.18	27.02	153.87	-0.27	-0.67	0.07	-0.02	-0.21	5.95
2/14/2024 14:00	87.49	41.65	33.11	31.18	125.69	-0.26	-0.43	0.09	-0.02	-0.19	5.87
2/14/2024 13:00	68.93	57.02	49.49	46.08	676.64	88.86	15.06	13.57	111.25	100.39	5.72
2/14/2024 12:00	34.36	33.16	36.52	29.81	2967.82	1014.41	230.35	121.82	118.83	166.84	5.72
2/14/2024 11:00	47.17	41.59	49.79	28.93	2488.41	932.47	223.74	114.67	173.18	233.7	5.69
2/14/2024 10:00	41.67	38.49	39.6	34.39	2551.21	1162.71	294.68	148.51	166.67	255.77	5.83
2/14/2024 9:00	134.6	164.36	158.72	85.6	997.89	114	23.25	15.7	122.39	108.13	5.93
2/14/2024 8:00	27.16	26.84	32.86	21.59	2095.12	424.63	83.15	44.26	60.88	72.45	5.76
2/14/2024 7:00	34.05	32.79	39.04	26.35	3911.77	1651.42	454.19	229.34	201.25	356.12	5.64
2/14/2024 6:00	32.71	33.33	39.67	27.02	3951.35	1649.97	454.35	227.81	202.18	355.22	5.63
2/14/2024 5:00	34.76	33.54	40.09	26.98	3985.36	1651.57	456.4	227.94	201.78	355.04	5.63
2/14/2024 4:00	35.54	33.48	39.82	26.93	4002.12	1651.39	456.63	228.57	201.79	355.63	5.62
2/14/2024 3:00	37.51	33.53	39.77	26.76	4066.6	1651.39	455.04	228.9	201.73	355.94	5.62
2/14/2024 2:00	31.13	32.85	37.8	26.76	4168.98	1706.35	480.23	231.36	191.03	366.22	5.62
2/14/2024 1:00	34.09	33.47	39.68	27.09	4254.02	1654.99	457.27	227.78	200.83	355.17	5.63
2/14/2024 0:00	35	33.37	39.82	26.73	4228.83	1651.35	453.94	228	202.28	355.71	5.67
2/13/2024 23:00	37.35	33.46	39.99	26.62	4270.87	1651.43	453.64	229.17	201.44	355.7	5.67
2/13/2024 22:00	33.82	33.52	40.11	26.88	4316.81	1650.51	453.85	228.74	202.14	355.68	5.68
2/13/2024 21:00	33.03	33.56	40.07	27.06	4297.57	1651.09	455.3	227.79	201.48	355.53	5.69
2/13/2024 20:00	33.88	33.21	39.74	27	4300.7	1652.19	457.08	227.03	201.58	355.88	5.69
2/13/2024 19:00	35.77	33.69	40.22	27.34	4359.72	1651.24	454.35	227.48	201.19	355.08	5.7
2/13/2024 18:00	37.49	34.21	40.66	27.28	4522.27	1651.19	455.3	229.2	201.89	356.34	5.7
2/13/2024 17:00	32.3	33.93	40.61	27.3	4580.73	1651.1	454.22	227.78	201.46	355.32	5.7
2/13/2024 16:00	34.88	34.38	40.58	27.71	5009.73	1690.42	474.13	228.74	195.27	368.21	5.69
2/13/2024 15:00	34.68	33.31	38.31	27.51	5039.25	1671.12	462.24	228.02	195.96	353.43	5.7
2/13/2024 14:00	37.28	34.13	40.48	27.31	4967.13	1651.32	453.94	228.05	201.63	356.1	5.69
2/13/2024 13:00	33.46	34.42	41.17	27.54	5070.76	1651.39	454.81	227.84	201.64	355.33	5.69
2/13/2024 12:00	34.47	34.63	41.64	27.59	4698.78	1650.86	454.97	227.07	201.79	355.95	5.71

Data Table 3_hourly

Timestamps	ro ait 3101 ec.output_v alue	ro ait 3102 ec.output_v alue	ro ait 3103 ec.output_v alue	ro ait 3104 ec.output_v alue	ro ait 3109 ec.output_v alue	ro fit 3100.output _value	ro fit 3102.output _value	ro fit 3103.output _value	ro fit 3104.output _value	ro fit 3105.output _value	ro ait 3101 ph.output_v alue
2/13/2024 11:00	35.27	34.42	41.14	27.74	4696.96	1651.56	457.51	226.48	201.71	355.33	5.75
2/13/2024 10:00	35.62	34.19	41.05	27.4	4720.21	1650.74	455.34	227.33	202.19	355.1	5.76
2/13/2024 9:00	34.95	34.01	40.74	26.9	4699	1652.6	453.89	227.94	201.29	355.67	5.77
2/13/2024 8:00	34.35	34.25	40.83	27.26	4770.55	1651.02	454.39	227.62	202.18	356.6	5.74
2/13/2024 7:00	34.79	34.17	40.91	27.44	4929.11	1652.15	454.93	226.78	201.4	354.51	5.72
2/13/2024 6:00	34.83	33.54	40.38	26.94	4716.71	1671.29	462.13	227.97	197.14	354.6	5.72
2/13/2024 5:00	35.38	33.39	38.11	26.75	5026.38	1689.14	474.71	230.01	194.68	366.2	5.78
2/13/2024 4:00	37.81	34.04	40.79	26.97	5002.9	1651.14	454.26	228.61	201.93	355.92	5.84
2/13/2024 3:00	34.97	33.41	40.23	26.86	5005.38	1650.53	454.25	226.3	201.58	355.99	5.86
2/13/2024 2:00	34.53	33.1	39.44	26.71	5114.48	1651.2	455.64	227.55	201.77	354.99	5.87
2/13/2024 1:00	37.31	33.8	40.37	26.83	5516.65	1651.33	454.33	228.33	201.98	355.97	5.88
2/13/2024 0:00	35.75	34.37	41.03	27.36	5699.71	1650.17	457.2	228.55	201.77	354.99	5.88
2/12/2024 23:00	33.32	34.05	41.07	27.22	5728.77	1650.94	455.18	227.5	201.97	355.62	5.89
2/12/2024 22:00	35.4	34.13	40.91	27.15	5829.81	1652.1	454.65	226.78	201	354.84	5.89
2/12/2024 21:00	36.71	33.88	37.13	27.33	5050.72	1555.75	432.22	207.95	190.57	347.45	5.95
2/12/2024 20:00	52.62	51.18	54.57	37.02	1470.59	110.6	17.28	16.14	122.34	100.28	5.96
2/12/2024 19:00	32.23	33.74	39.52	27.85	5572.96	1552.62	417.82	206.75	184.92	308.71	5.94
2/12/2024 18:00	34.63	34.57	41.69	27.46	6087.2	1651.72	455.29	226.89	201.7	355.69	5.95
2/12/2024 17:00	35.85	34.39	41.37	27.12	6144.55	1651.81	454.91	227.09	201.66	355.28	5.98
2/12/2024 16:00	63.21	61.45	55.43	44.34	3590.33	1056.34	280.25	138.86	206.36	307.61	6.06
2/12/2024 15:00	33.67	35.71	42.55	28.21	4254.51	968.51	226.09	113.31	104.26	168.85	5.98
2/12/2024 14:00	32.75	33.7	40.51	26.36	6366.88	1649.95	458.48	226.71	201.77	355.33	6.02
2/12/2024 13:00	33.35	32.73	38.97	25.94	6328.24	1650.56	457.43	226.27	202.2	355.67	6.08
2/12/2024 12:00	33.95	32.5	38.58	26.11	6183.48	1650.96	455.74	227.08	202.03	355.87	6.09
2/12/2024 11:00	36.25	32.42	37.97	25.98	6246.39	1661.36	460.85	229.77	199.39	354.56	6.11
2/12/2024 10:00	29.06	30.68	34.78	25.16	6556.51	1701.41	478.06	230.98	192.38	367.11	6.17
2/12/2024 9:00	30.37	30.3	33.69	24.37	1063.98	409.36	84.07	49.86	165.83	168.41	6.4
2/12/2024 8:00	29.46	29.05	33.89	23.94	6484.98	1629.92	448.25	224.6	203.58	353.72	5.91
2/12/2024 7:00	31.3	30.44	33.91	25.79	2178.1	1612.06	452.14	217.25	198.2	365.9	6.65
2/12/2024 6:00	22.54	44.53	30.66	27.48	350.12	-0.44	-0.71	0.04	54.04	0.59	6.81
2/12/2024 5:00	22.53	44.54	30.66	27.48	348.38	-0.44	-0.71	0.04	54.16	-0.28	6.81
2/12/2024 4:00	22.53	44.54	30.66	27.48	346.59	-0.43	-0.71	0.04	54.18	-0.22	6.81
2/12/2024 3:00	22.52	44.55	30.66	27.49	344.07	-0.43	-0.71	0.05	54.2	-0.3	6.82
2/12/2024 2:00	22.52	44.55	30.66	27.49	341.08	-0.42	-0.71	0.05	54.23	-0.3	6.82
2/12/2024 1:00	22.52	44.56	30.66	27.5	337.55	-0.41	-0.71	0.05	54.29	-0.3	6.82
2/12/2024 0:00	22.52	44.56	30.66	27.51	335.16	-0.41	-0.7	0.05	54.33	-0.27	6.82
2/11/2024 23:00	22.52	44.57	30.65	27.52	332.66	-0.4	-0.7	0.05	54.32	-0.27	6.82
2/11/2024 22:00	22.52	44.58	30.65	27.53	330.66	-0.39	-0.7	0.05	54.42	-0.28	6.83
2/11/2024 21:00	22.53	44.59	30.64	27.53	329.53	-0.38	-0.69	0.05	54.49	-0.29	6.83
2/11/2024 20:00	22.54	44.6	30.64	27.55	330.38	-0.36	-0.69	0.05	54.57	-0.27	6.83
2/11/2024 19:00	22.54	44.61	30.62	27.56	335.15	-0.35	-0.69	0.06	54.61	-0.24	6.83
2/11/2024 18:00	22.55	44.62	30.58	27.56	340.21	-0.34	-0.69	0.06	54.66	-0.2	6.83
2/11/2024 17:00	22.56	44.62	30.58	27.56	341.05	-0.34	-0.68	0.06	54.71	-0.21	6.84
2/11/2024 16:00	22.58	44.62	30.56	27.56	339.99	-0.33	-0.69	0.06	54.72	-0.21	6.84
2/11/2024 15:00	22.58	44.62	30.54	27.56	338.52	-0.34	-0.68	0.06	54.77	-0.17	6.84
2/11/2024 14:00	22.58	44.64	30.48	27.57	337.49	-0.34	-0.69	0.06	54.67	-0.18	6.84
2/11/2024 13:00	22.56	44.65	30.44	27.56	336.51	-0.34	-0.69	0.06	54.62	-0.25	6.85
2/11/2024 12:00	22.56	44.66	30.41	27.57	336.09	-0.35	-0.69	0.06	54.58	-0.24	6.85
2/11/2024 11:00	22.6	44.66	30.36	27.57	335.91	-0.37	-0.7	0.05	54.52	-0.22	6.85
2/11/2024 10:00	22.7	44.69	30.32	27.57	334.69	-0.38	-0.7	0.05	54.44	-0.23	6.86
2/11/2024 9:00	22.79	44.72	30.29	27.59	332.08	-0.41	-0.7	0.05	54.42	-0.26	6.85

Data Table 3_hourly

Timestamps	ro ait 3101 ec.output_v alue	ro ait 3102 ec.output_v alue	ro ait 3103 ec.output_v alue	ro ait 3104 ec.output_v alue	ro ait 3109 ec.output_v alue	ro fit 3100.output _value	ro fit 3102.output _value	ro fit 3103.output _value	ro fit 3104.output _value	ro fit 3105.output _value	ro ait 3101 ph.output_v alue
2/11/2024 8:00	22.79	44.72	30.28	27.62	324.28	-0.42	-0.71	0.05	54.34	-0.27	6.85
2/11/2024 7:00	22.82	44.76	30.27	27.63	317.46	-0.42	-0.71	0.05	54.34	-0.31	6.84
2/11/2024 6:00	22.84	44.77	30.26	27.63	316.71	-0.42	-0.71	0.05	54.32	-0.31	6.83
2/11/2024 5:00	22.89	44.79	30.23	27.7	315.35	-0.41	-0.7	0.05	54.39	-0.27	6.82
2/11/2024 4:00	22.98	44.93	30.16	27.72	313.94	-0.41	-0.7	0.05	54.43	-0.28	6.82
2/11/2024 3:00	22.95	45.03	29.93	27.75	312.71	-0.4	-0.7	0.05	54.51	-0.29	6.81
2/11/2024 2:00	23.05	45.03	29.42	27.76	309.91	-0.39	-0.7	0.05	54.5	-0.28	6.79
2/11/2024 1:00	23.17	45.04	29.3	27.75	305.94	-0.39	-0.7	0.05	54.57	-0.29	6.78
2/11/2024 0:00	23.36	45.05	29.94	27.77	302.18	-0.38	-0.69	0.05	54.6	-0.31	6.76
2/10/2024 23:00	23.7	45.06	31.57	27.79	299.27	-0.36	-0.69	0.05	54.69	-0.31	6.74
2/10/2024 22:00	23.96	45.07	32.13	27.79	294.92	-0.36	-0.69	0.06	54.72	-0.24	6.72

Data Table 3_hourly

Timestamps	ro pit 3109.output_value	ro pit 3001.output_value	ro pit 3100.output_value	ro pit 3101.output_value	ro pit 3102.output_value	ro pit 3103.output_value	ro pit 3104.output_value	ro pit 3105.output_value	ro pit 3106.output_value	ro pit 3107.output_value	ro pit 3200.output_value
2/19/2024 20:00	5.41	NoData	4.7	4.61	4.56	5.91	5.96	4.58	4.5	5.86	84.63
2/19/2024 19:00	5.41	NoData	88	9.03	8.92	74.27	91.83	76.93	91.65	83.73	84.67
2/19/2024 18:00	5.41	NoData	129.88	10.79	10.4	113.4	140.95	126.22	141.63	125.78	84.67
2/19/2024 17:00	5.41	NoData	37.88	5.44	5.24	37.5	36.39	32.21	33.38	30.05	84.6
2/19/2024 16:00	5.41	NoData	3.1	3.09	3.07	4.37	4.61	3.02	2.9	4.46	84.66
2/19/2024 15:00	5.41	NoData	14.65	5.27	5.42	11.8	14.04	8.82	10.21	7.14	84.66
2/19/2024 14:00	5.4	NoData	3.95	1.88	1.87	5.24	5.36	3.85	3.72	5.21	84.66
2/19/2024 13:00	5.4	NoData	38.17	5.17	5.12	33.16	42.9	36.66	42.24	41.18	84.67
2/19/2024 12:00	5.39	NoData	125.07	14.19	13.76	110.2	133.07	118.57	133.68	118.55	84.71
2/19/2024 11:00	5.39	NoData	77.27	9.39	8.95	67.28	80.32	69.97	78	67.74	84.76
2/19/2024 10:00	5.39	NoData	97.57	10.47	10	85.81	107.93	96.38	101.34	96	84.73
2/19/2024 9:00	5.39	NoData	1.11	1.88	1.87	2.05	2.89	1.07	0.92	3.59	84.61
2/19/2024 8:00	5.39	NoData	1.12	1.88	1.87	2.06	2.92	1.09	0.96	3.59	84.62
2/19/2024 7:00	5.4	NoData	1.15	1.88	1.87	2.08	2.93	1.11	0.97	3.59	84.6
2/19/2024 6:00	5.4	NoData	1.18	1.88	1.87	2.12	2.97	1.15	1	3.63	84.62
2/19/2024 5:00	5.41	NoData	1.2	1.88	1.87	2.15	3	1.16	1.02	3.64	84.62
2/19/2024 4:00	5.41	NoData	1.25	1.88	1.87	2.19	3.03	1.21	1.07	3.62	84.6
2/19/2024 3:00	5.41	NoData	1.34	1.88	1.87	2.29	3.11	1.31	1.16	3.64	84.62
2/19/2024 2:00	5.41	NoData	1.36	1.88	1.87	2.31	3.11	1.32	1.16	3.64	84.62
2/19/2024 1:00	5.42	NoData	1.36	1.88	1.87	2.32	3.11	1.32	1.19	3.64	84.61
2/19/2024 0:00	5.42	NoData	1.37	1.88	1.87	2.32	3.14	1.33	1.21	3.6	84.64
2/18/2024 23:00	5.42	NoData	1.4	1.88	1.87	2.32	3.15	1.36	1.21	3.59	84.6
2/18/2024 22:00	5.43	NoData	1.4	1.88	1.87	2.33	3.15	1.36	1.21	3.59	84.62
2/18/2024 21:00	5.43	NoData	1.4	1.88	1.87	2.35	3.15	1.36	1.21	3.59	84.63
2/18/2024 20:00	5.43	NoData	1.4	1.88	1.87	2.35	3.15	1.36	1.21	3.59	84.63
2/18/2024 19:00	5.43	NoData	1.43	1.88	1.87	2.4	3.19	1.38	1.23	3.59	84.6
2/18/2024 18:00	5.43	NoData	1.64	1.88	1.87	2.67	3.37	1.6	1.46	3.6	84.62
2/18/2024 17:00	5.43	NoData	1.76	1.88	1.87	2.8	3.46	1.71	1.58	3.64	84.64
2/18/2024 16:00	5.44	NoData	1.79	1.88	1.87	2.83	3.5	1.75	1.6	3.64	84.63
2/18/2024 15:00	5.44	NoData	1.82	1.88	1.87	2.87	3.52	1.78	1.65	3.61	84.63
2/18/2024 14:00	5.44	NoData	1.85	1.88	1.87	2.9	3.54	1.8	1.67	3.64	84.61
2/18/2024 13:00	5.45	NoData	1.89	1.9	1.89	2.96	3.57	1.84	1.7	3.64	84.63
2/18/2024 12:00	5.45	NoData	1.94	1.95	1.94	3.03	3.63	1.9	1.77	3.62	84.65
2/18/2024 11:00	5.45	NoData	2.03	2.03	2.01	3.16	3.69	1.98	1.86	3.56	84.63
2/18/2024 10:00	5.45	NoData	2.17	2.14	2.13	3.31	3.81	2.13	2	3.54	84.63
2/18/2024 9:00	5.46	NoData	2.31	2.28	2.28	3.45	3.91	2.25	2.09	3.63	84.63
2/18/2024 8:00	5.46	NoData	2.78	2.75	2.75	4.02	4.33	2.74	2.6	4.09	84.66
2/18/2024 7:00	5.47	NoData	3.7	3.67	3.69	4.94	5.04	3.56	3.43	4.92	84.65
2/18/2024 6:00	5.48	NoData	14.24	5.02	5.3	12.32	14.07	9.53	9.37	7.71	84.65
2/18/2024 5:00	5.49	NoData	97.51	9.33	8.75	85.65	105.65	93.39	102.4	92.63	84.68
2/18/2024 4:00	5.5	NoData	127.87	10.54	10.19	111.34	136.26	121.05	135.14	119.44	84.68
2/18/2024 3:00	5.5	NoData	128.23	10.53	10.19	111.71	136.1	121.09	133.93	118.17	84.72
2/18/2024 2:00	5.5	NoData	128.05	10.53	10.19	111.49	135.63	120.73	132.73	117.27	84.78
2/18/2024 1:00	5.5	NoData	127.46	10.54	10.19	110.83	135.4	121.03	133.25	117.85	84.73
2/18/2024 0:00	5.5	NoData	126.94	10.55	10.2	110.39	135.48	120.33	135.31	119.61	84.68
2/17/2024 23:00	5.49	NoData	126.65	10.54	10.19	110.18	135.12	120.03	135.66	119.46	84.65
2/17/2024 22:00	5.48	NoData	128.96	10.59	10.24	112.24	138.53	123.78	135.09	119.61	84.79
2/17/2024 21:00	5.46	NoData	128.54	10.56	10.22	111.81	137.19	122.14	135.15	120.32	84.72
2/17/2024 20:00	5.44	NoData	127.03	10.55	10.19	110.54	135.74	120.61	135.37	119.66	84.69
2/17/2024 19:00	5.4	NoData	126.47	10.54	10.19	110.14	135.39	120.46	135.77	119.4	84.64
2/17/2024 18:00	5.35	NoData	127.08	10.54	10.2	110.58	135.17	120.03	134.31	118.32	84.7

Data Table 3_hourly

Timestamps	ro pit 3109.output_value	ro pit 3001.output_value	ro pit 3100.output_value	ro pit 3101.output_value	ro pit 3102.output_value	ro pit 3103.output_value	ro pit 3104.output_value	ro pit 3105.output_value	ro pit 3106.output_value	ro pit 3107.output_value	ro pit 3200.output_value
2/17/2024 17:00	5.28	NoData	127.35	10.54	10.2	110.83	134.96	119.89	133.2	117.8	84.74
2/17/2024 16:00	5.26	NoData	126.74	10.53	10.19	110.25	134.81	119.78	134.22	118.84	84.69
2/17/2024 15:00	5.25	NoData	126.42	11.31	10.96	109.98	134.86	119.86	136.12	120.26	84.67
2/17/2024 14:00	5.25	NoData	125.91	11.93	11.57	109.45	133.32	118.21	133.11	117.41	84.64
2/17/2024 13:00	5.25	NoData	121.55	10.73	10.38	105.79	129.94	115.34	127.75	111.96	84.69
2/17/2024 12:00	5.26	NoData	2.81	2.04	2.17	3.69	4.04	2.1	1.99	3.98	84.6
2/17/2024 11:00	5.27	NoData	1.4	1.88	1.87	2.32	3.18	1.36	1.21	3.69	84.6
2/17/2024 10:00	5.27	NoData	1.4	1.88	1.87	2.32	3.18	1.36	1.21	3.69	84.61
2/17/2024 9:00	5.27	NoData	1.4	1.88	1.87	2.31	3.15	1.36	1.21	3.69	84.61
2/17/2024 8:00	5.27	NoData	1.4	1.88	1.87	2.3	3.15	1.36	1.21	3.69	84.61
2/17/2024 7:00	5.27	NoData	1.4	1.88	1.87	2.29	3.16	1.36	1.21	3.69	84.61
2/17/2024 6:00	5.27	NoData	1.44	1.88	1.87	2.37	3.18	1.39	1.24	3.69	84.61
2/17/2024 5:00	5.27	NoData	1.68	1.88	1.87	2.67	3.42	1.63	1.5	3.69	84.6
2/17/2024 4:00	5.26	NoData	1.77	1.88	1.87	2.77	3.5	1.72	1.6	3.65	84.6
2/17/2024 3:00	5.27	NoData	1.79	1.88	1.87	2.82	3.53	1.75	1.62	3.64	84.62
2/17/2024 2:00	5.27	NoData	1.82	1.88	1.87	2.85	3.55	1.78	1.64	3.66	84.61
2/17/2024 1:00	5.27	NoData	1.86	1.88	1.87	2.88	3.58	1.81	1.68	3.69	84.6
2/17/2024 0:00	5.27	NoData	1.88	1.9	1.89	2.92	3.61	1.84	1.7	3.69	84.61
2/16/2024 23:00	5.27	NoData	1.93	1.94	1.93	2.96	3.63	1.88	1.75	3.69	84.61
2/16/2024 22:00	5.27	NoData	1.96	1.98	1.97	3.01	3.67	1.92	1.79	3.69	84.62
2/16/2024 21:00	5.27	NoData	2.03	2.03	2.02	3.09	3.72	1.97	1.85	3.66	84.63
2/16/2024 20:00	5.27	NoData	2.1	2.09	2.08	3.17	3.79	2.06	1.94	3.6	84.62
2/16/2024 19:00	5.27	NoData	2.19	2.14	2.13	3.28	3.87	2.15	2.02	3.62	84.61
2/16/2024 18:00	5.27	NoData	2.63	2.55	2.54	3.8	4.22	2.6	2.47	4.02	84.62
2/16/2024 17:00	5.26	NoData	7.96	4.51	4.56	8.02	9.59	5.9	6.02	5.73	84.62
2/16/2024 16:00	5.27	NoData	111.93	11.54	11.26	97.67	117.92	103.65	116.35	101.78	84.67
2/16/2024 15:00	5.27	NoData	126.52	12.07	11.72	110.07	134.89	119.87	135.81	120.31	84.67
2/16/2024 14:00	5.27	NoData	126.09	12.01	11.67	109.66	134.7	119.66	137.07	121.4	84.65
2/16/2024 13:00	5.28	NoData	128.24	12.19	11.84	111.49	138.25	123.49	137.77	122.44	84.73
2/16/2024 12:00	5.28	NoData	127.02	12.12	11.77	110.52	133.77	118.72	132.8	117.39	84.79
2/16/2024 11:00	5.29	NoData	126.66	12.11	11.77	110.28	135.83	120.96	138.86	123	84.69
2/16/2024 10:00	5.3	NoData	127.64	12.06	11.73	111.26	136.24	121.24	138.32	122.63	84.69
2/16/2024 9:00	5.31	NoData	127.93	12.07	11.73	111.51	135.62	120.8	135.34	119.92	84.76
2/16/2024 8:00	5.3	NoData	77.84	8.77	8.58	67.41	86.15	74.86	83.56	76.68	84.76
2/16/2024 7:00	5.3	NoData	104.7	10	9.73	90.11	110.02	96.64	108.32	95.82	84.76
2/16/2024 6:00	5.3	NoData	126.69	10.6	10.23	110.09	137.22	122.65	140.21	124.32	84.75
2/16/2024 5:00	5.31	NoData	126.99	11.01	10.67	110.44	135.31	120.27	137.33	121.77	84.71
2/16/2024 4:00	5.31	NoData	128.32	12.05	11.71	111.8	136.27	121.2	135.96	120.66	84.77
2/16/2024 3:00	5.32	NoData	127.92	12.05	11.72	111.38	136.04	121.11	136.64	121.41	84.77
2/16/2024 2:00	5.32	NoData	127.62	12.09	11.74	111.09	136.21	122.03	137.7	122.55	84.73
2/16/2024 1:00	5.33	NoData	127.44	12.13	11.79	110.97	135.93	120.95	137.33	121.83	84.7
2/16/2024 0:00	5.33	NoData	127.87	12.06	11.72	111.37	135.95	120.97	136.85	121.17	84.73
2/15/2024 23:00	5.32	NoData	128.22	12.06	11.73	111.68	135.96	120.92	135.53	120.3	84.77
2/15/2024 22:00	5.31	NoData	127.54	12.07	11.73	111.08	135.84	121.55	136.63	121.47	84.74
2/15/2024 21:00	5.29	NoData	126.95	12.09	11.73	110.49	135.98	121.12	138.21	122.94	84.71
2/15/2024 20:00	5.29	NoData	127.63	12.21	11.85	111.1	139.21	124.38	144.42	128.91	84.67
2/15/2024 19:00	5.3	NoData	127.2	12.07	11.73	110.74	134.46	120.29	133.83	118.59	84.77
2/15/2024 18:00	5.29	NoData	126.17	12.01	11.68	109.74	132.86	118	133.03	118.11	84.72
2/15/2024 17:00	5.28	NoData	61.29	7.41	6.67	57	62.66	60	72.61	68.43	84.62
2/15/2024 16:00	5.28	NoData	1.99	1.99	1.98	2.99	3.73	1.94	1.81	3.69	84.56
2/15/2024 15:00	5.28	NoData	2.13	2.1	2.09	3.16	3.89	2.12	1.98	3.71	84.55

Data Table 3_hourly

Timestamps	ro ait 3109 ph.output_v alue	ro pit 3001.output _value	ro pit 3100.output _value	ro pit 3101.output _value	ro pit 3102.output _value	ro pit 3103.output _value	ro pit 3104.output _value	ro pit 3105.output _value	ro pit 3106.output _value	ro pit 3107.output _value	ro pit 3200.output _value
2/15/2024 14:00	5.27	NoData	2.47	2.5	2.48	3.68	4.22	2.47	2.41	4.03	84.56
2/15/2024 13:00	5.26	NoData	32.38	7.08	6.91	25.91	30.94	24.06	25.78	22.4	84.56
2/15/2024 12:00	5.26	NoData	128.56	14.21	13.84	112.09	139.51	124.65	144.18	128.35	84.59
2/15/2024 11:00	5.27	NoData	128.75	13.9	13.58	112.15	136.52	122.29	137.09	122.03	84.75
2/15/2024 10:00	5.29	NoData	128.58	14.43	14.08	112.22	136.02	121.12	137.38	122.29	84.75
2/15/2024 9:00	5.3	NoData	64.59	7.26	6.66	56.5	71.42	62.12	71.46	66.27	84.7
2/15/2024 8:00	5.3	NoData	28.22	6.03	5.77	24.02	30.75	24.17	27.78	23.62	84.65
2/15/2024 7:00	5.31	NoData	126.54	12.13	11.78	110.23	134.92	120.59	138.89	123.1	84.7
2/15/2024 6:00	5.32	NoData	127.43	12.06	11.72	110.99	135.55	121.35	137.28	121.79	84.76
2/15/2024 5:00	5.33	NoData	127.95	12.06	11.72	111.54	135.98	121.61	137.7	122.27	84.77
2/15/2024 4:00	5.35	NoData	127.36	12.07	11.72	110.93	135.66	121.36	138.41	122.95	84.75
2/15/2024 3:00	5.38	NoData	126.59	12.07	11.72	110.27	135.16	120.27	139.25	123.74	84.7
2/15/2024 2:00	5.44	NoData	126.3	12.06	11.73	109.98	134.4	120.13	138.55	122.8	84.69
2/15/2024 1:00	5.53	NoData	127.06	12.07	11.73	110.67	134.57	120.47	136.94	121.49	84.75
2/15/2024 0:00	5.86	NoData	117.43	11.43	11.18	103.51	124.44	110.37	125.11	112.99	84.8
2/14/2024 23:00	6.34	NoData	1.86	1.88	1.87	2.79	3.62	1.81	1.68	3.93	84.57
2/14/2024 22:00	6.3	NoData	1.86	1.88	1.87	2.81	3.62	2.03	1.69	3.93	84.59
2/14/2024 21:00	6.26	NoData	1.86	1.88	1.87	2.82	3.64	1.82	1.69	3.93	84.58
2/14/2024 20:00	6.22	NoData	1.86	1.88	1.87	2.82	3.66	1.82	1.69	3.85	84.59
2/14/2024 19:00	6.17	NoData	1.89	1.9	1.89	2.85	3.67	1.84	1.71	3.83	84.6
2/14/2024 18:00	6.1	NoData	1.93	1.95	1.94	2.91	3.71	1.89	1.76	3.84	84.6
2/14/2024 17:00	6.05	NoData	2.03	2.02	2.01	3.01	3.77	1.98	1.85	3.84	84.58
2/14/2024 16:00	6	NoData	2.16	2.12	2.12	3.16	3.9	2.1	1.98	3.84	84.58
2/14/2024 15:00	5.95	NoData	2.26	2.23	2.24	3.32	3.99	2.22	2.08	3.93	84.61
2/14/2024 14:00	5.87	NoData	2.84	2.78	2.77	3.97	4.48	2.77	2.65	4.47	84.59
2/14/2024 13:00	5.72	NoData	12.58	5.05	5.33	11.74	13.69	8.57	9.36	7.29	84.6
2/14/2024 12:00	5.72	NoData	75.1	8.25	8.43	64.72	79.72	69.18	81.47	73.94	84.65
2/14/2024 11:00	5.69	NoData	65.6	8.64	8.39	55.39	66.42	59.27	64.93	57.9	84.7
2/14/2024 10:00	5.83	NoData	76.45	9.03	9	65.86	79.38	70.64	82.96	73.4	84.72
2/14/2024 9:00	5.93	NoData	15.18	5.56	5.42	12.26	13.39	9.63	9.91	6.6	84.75
2/14/2024 8:00	5.76	NoData	28.75	4.81	5.18	25.3	32.45	27.31	29.62	28.13	84.75
2/14/2024 7:00	5.64	NoData	127.4	12.84	12.52	110.86	134.62	119.8	135.61	120.5	84.77
2/14/2024 6:00	5.63	NoData	125.61	12	11.65	109.25	133.52	118.3	135.77	120.47	84.78
2/14/2024 5:00	5.63	NoData	125.07	11.99	11.63	108.71	132.87	118.04	136.27	120.32	84.76
2/14/2024 4:00	5.62	NoData	125.22	11.97	11.63	108.8	132.55	117.3	135.03	119.51	84.72
2/14/2024 3:00	5.62	NoData	125.72	11.96	11.63	109.21	132.77	117.85	133.71	118.4	84.82
2/14/2024 2:00	5.62	NoData	126.99	12.11	11.75	110.29	136.82	121.97	139.2	124.38	84.79
2/14/2024 1:00	5.63	NoData	124.79	11.99	11.64	108.35	132.7	117.79	136.59	121.2	84.75
2/14/2024 0:00	5.67	NoData	125.02	11.98	11.63	108.6	132.39	118.17	135.07	119.61	84.73
2/13/2024 23:00	5.67	NoData	125.38	11.97	11.63	108.94	132.36	118.16	133.73	118.53	84.81
2/13/2024 22:00	5.68	NoData	125.06	11.97	11.64	108.62	132.01	117.11	133.65	118.4	84.76
2/13/2024 21:00	5.69	NoData	124.38	12	11.65	107.95	131.81	116.88	134.59	119.5	84.75
2/13/2024 20:00	5.69	NoData	123.5	12.04	11.7	107.15	130.97	116.81	134.57	119.08	84.69
2/13/2024 19:00	5.7	NoData	123.47	11.98	11.64	107.16	130.83	115.7	133.8	118.25	84.71
2/13/2024 18:00	5.7	NoData	124.21	11.97	11.63	107.81	131.12	116.38	132.36	117.27	84.8
2/13/2024 17:00	5.7	NoData	123.59	11.97	11.63	107.28	130.83	115.67	133.48	118.5	84.75
2/13/2024 16:00	5.69	NoData	123.97	12.09	11.72	107.48	133.99	119.31	139.43	123.98	84.73
2/13/2024 15:00	5.7	NoData	123.43	12.02	11.68	107.05	132	117.04	138.05	122.91	84.65
2/13/2024 14:00	5.69	NoData	123.14	11.97	11.63	106.71	130.1	115.29	132.21	116.95	84.76
2/13/2024 13:00	5.69	NoData	123.67	11.97	11.64	107.24	131.1	116.12	134.99	119.87	84.76
2/13/2024 12:00	5.71	NoData	123.24	12	11.65	106.85	131.28	117.05	136.07	121.09	84.76

Data Table 3_hourly

Timestamps	ro ait 3109 ph.output_v alue	ro pit 3001.output _value	ro pit 3100.output _value	ro pit 3101.output _value	ro pit 3102.output _value	ro pit 3103.output _value	ro pit 3104.output _value	ro pit 3105.output _value	ro pit 3106.output _value	ro pit 3107.output _value	ro pit 3200.output _value
2/13/2024 11:00	5.75	NoData	122.83	12.01	11.66	106.48	130.97	115.98	136.83	121.31	84.71
2/13/2024 10:00	5.76	NoData	123.49	12.06	11.72	107.12	131.32	116.32	135.78	120.54	84.73
2/13/2024 9:00	5.77	NoData	123.56	12.02	11.68	107.14	130.78	115.91	133.91	118.6	84.8
2/13/2024 8:00	5.74	NoData	122.04	10.76	10.42	105.6	129.35	114.33	132.99	117.68	84.79
2/13/2024 7:00	5.72	NoData	121.9	10.73	10.37	105.48	129.89	114.96	134.72	119.49	84.76
2/13/2024 6:00	5.72	NoData	123.85	12.12	11.77	107.47	132.63	117.52	138.07	122.5	84.76
2/13/2024 5:00	5.78	NoData	124.75	12.16	11.82	108.17	134	119.44	137.09	122.04	84.81
2/13/2024 4:00	5.84	NoData	124.13	12.07	11.73	107.7	130.81	115.82	132.73	117.68	84.88
2/13/2024 3:00	5.86	NoData	122.49	12.08	11.74	106.3	130.3	115.37	135.24	119.64	84.77
2/13/2024 2:00	5.87	NoData	122.19	12.08	11.74	105.9	129.05	114.16	132.14	116.83	84.75
2/13/2024 1:00	5.88	NoData	122.96	12.12	11.78	106.6	129.77	114.82	131.91	116.66	84.81
2/13/2024 0:00	5.88	NoData	123.1	12.12	11.78	106.71	130.13	115.07	132.78	117.87	84.81
2/12/2024 23:00	5.89	NoData	122.29	12.09	11.75	105.99	129.61	114.57	133.62	118.34	84.79
2/12/2024 22:00	5.89	NoData	121.65	12.01	11.67	105.42	129.17	114.28	134.03	118.35	84.75
2/12/2024 21:00	5.95	NoData	112.88	11.46	11.15	98.22	120.55	104.63	123.63	110.99	84.72
2/12/2024 20:00	5.96	NoData	14.51	4.36	4.89	12.28	14.32	8.95	9.56	8.01	84.76
2/12/2024 19:00	5.94	NoData	105.44	10.75	10.67	91.9	112.73	99.91	115.25	103.73	84.76
2/12/2024 18:00	5.95	NoData	121.56	12.09	11.74	105.26	129.43	115.34	134.33	119.11	84.75
2/12/2024 17:00	5.98	NoData	121.61	12.06	11.72	105.36	129.17	115.03	133.89	118.53	84.71
2/12/2024 16:00	6.06	NoData	75.4	9.72	9.75	65.59	81.98	70.06	82.32	72.73	84.68
2/12/2024 15:00	5.98	NoData	62.56	7.57	7.83	55.63	68.63	61.95	70.15	68.76	84.66
2/12/2024 14:00	6.02	NoData	123.23	12.29	11.95	106.77	131.15	116.26	135.74	120.36	84.73
2/12/2024 13:00	6.08	NoData	123.42	12.31	11.95	106.95	130.84	115.69	136	120.23	84.69
2/12/2024 12:00	6.09	NoData	123.71	12.36	12.02	107.3	130.5	115.58	134.19	118.21	84.68
2/12/2024 11:00	6.11	NoData	124.55	12.13	11.8	107.96	130.08	114.73	129.86	114.64	84.8
2/12/2024 10:00	6.17	NoData	124.88	11.97	11.62	108.22	132.58	117.7	133.75	118.65	84.76
2/12/2024 9:00	6.4	NoData	29.18	6.84	6.69	26.43	30.83	24.65	26.66	24.25	84.66
2/12/2024 8:00	5.91	NoData	121.72	11.78	11.44	105.53	126.88	111.75	127.65	112.32	84.73
2/12/2024 7:00	6.65	NoData	116.05	10.91	10.58	100.5	123.8	109.05	126.78	110.55	84.7
2/12/2024 6:00	6.81	NoData	1.23	1.92	1.9	2.16	3.12	1.23	0.94	4.71	84.68
2/12/2024 5:00	6.81	NoData	0.92	1.87	1.87	1.7	2.8	0.89	0.72	4.69	84.69
2/12/2024 4:00	6.81	NoData	0.92	1.87	1.87	1.71	2.8	0.89	0.72	4.69	84.69
2/12/2024 3:00	6.82	NoData	0.92	1.87	1.87	1.71	2.8	0.89	0.73	4.69	84.69
2/12/2024 2:00	6.82	NoData	0.93	1.87	1.87	1.71	2.8	0.89	0.77	4.69	84.7
2/12/2024 1:00	6.82	NoData	0.93	1.87	1.87	1.71	2.8	0.89	0.77	4.69	84.69
2/12/2024 0:00	6.82	NoData	0.94	1.87	1.87	1.73	2.81	0.9	0.77	4.66	84.7
2/11/2024 23:00	6.82	NoData	1	1.87	1.87	1.79	2.88	0.97	0.84	4.65	84.69
2/11/2024 22:00	6.83	NoData	1.1	1.87	1.87	1.88	2.96	1.07	0.92	4.64	84.7
2/11/2024 21:00	6.83	NoData	1.12	1.87	1.87	1.89	3	1.09	0.96	4.65	84.7
2/11/2024 20:00	6.83	NoData	1.12	1.87	1.87	1.92	3	1.09	0.97	4.66	84.7
2/11/2024 19:00	6.83	NoData	1.16	1.87	1.87	1.93	3.03	1.13	0.98	4.69	84.71
2/11/2024 18:00	6.83	NoData	1.16	1.87	1.87	1.95	3.04	1.13	1.02	4.7	84.71
2/11/2024 17:00	6.84	NoData	1.17	1.87	1.87	1.95	3.04	1.13	1.02	4.7	84.72
2/11/2024 16:00	6.84	NoData	1.2	1.88	1.87	1.98	3.07	1.16	1.02	4.7	84.71
2/11/2024 15:00	6.84	NoData	1.21	1.88	1.87	1.99	3.08	1.18	1.04	4.7	84.72
2/11/2024 14:00	6.84	NoData	1.27	1.87	1.87	2.06	3.13	1.23	1.08	4.73	84.71
2/11/2024 13:00	6.85	NoData	1.35	1.87	1.87	2.15	3.21	1.31	1.16	4.73	84.72
2/11/2024 12:00	6.85	NoData	1.36	1.87	1.87	2.16	3.23	1.32	1.17	4.7	84.71
2/11/2024 11:00	6.85	NoData	1.35	1.87	1.87	2.18	3.23	1.32	1.21	4.69	84.71
2/11/2024 10:00	6.86	NoData	1.37	1.87	1.87	2.2	3.23	1.34	1.2	4.69	84.7
2/11/2024 9:00	6.85	NoData	1.39	1.87	1.87	2.2	3.22	1.36	1.21	4.69	84.71

Data Table 3_hourly

Timestamps	ro ait 3109 ph.output_v alue	ro pit 3001.output _value	ro pit 3100.output _value	ro pit 3101.output _value	ro pit 3102.output _value	ro pit 3103.output _value	ro pit 3104.output _value	ro pit 3105.output _value	ro pit 3106.output _value	ro pit 3107.output _value	ro pit 3200.output _value
2/11/2024 8:00	6.85	NoData	1.39	1.87	1.87	2.18	3.22	1.35	1.2	4.65	84.69
2/11/2024 7:00	6.84	NoData	1.39	1.87	1.87	2.17	3.22	1.35	1.21	4.64	84.71
2/11/2024 6:00	6.83	NoData	1.41	1.87	1.87	2.19	3.24	1.37	1.22	4.64	84.69
2/11/2024 5:00	6.82	NoData	1.67	1.87	1.87	2.53	3.5	1.63	1.51	4.64	84.7
2/11/2024 4:00	6.82	NoData	1.77	1.87	1.87	2.63	3.6	1.73	1.59	4.64	84.7
2/11/2024 3:00	6.81	NoData	1.8	1.87	1.87	2.67	3.63	1.76	1.64	4.64	84.69
2/11/2024 2:00	6.79	NoData	1.83	1.87	1.87	2.71	3.66	1.8	1.66	4.64	84.7
2/11/2024 1:00	6.78	NoData	1.87	1.88	1.87	2.76	3.69	1.83	1.69	4.65	84.69
2/11/2024 0:00	6.76	NoData	1.9	1.91	1.91	2.79	3.73	1.86	1.74	4.65	84.71
2/10/2024 23:00	6.74	NoData	1.94	1.95	1.94	2.82	3.76	1.9	1.77	4.68	84.7
2/10/2024 22:00	6.72	NoData	1.98	1.99	1.98	2.87	3.8	1.94	1.81	4.7	84.71

Data Table 3_hourly

Timestamps	ro tit 3100.output value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/19/2024 20:00	69.16	-1.23	0.01	1.39	-0.02	-1.39	-0.01
2/19/2024 19:00	69.22	10.63	7.79	11.99	7.19	11.25	4.85
2/19/2024 18:00	69.12	16.51	13.23	14.74	12.35	15.96	10.51
2/19/2024 17:00	68.93	2.52	1.9	4.55	2.27	4.07	1.68
2/19/2024 16:00	68.98	-1.28	0.01	1.56	-0.02	-1.55	0
2/19/2024 15:00	68.73	0.9	0.44	3.82	0.32	1.87	0.52
2/19/2024 14:00	68.42	-1.27	0.01	1.48	-0.02	-1.49	-0.02
2/19/2024 13:00	68.72	2.56	2.5	4.32	2.96	2.34	1.83
2/19/2024 12:00	68.8	15.06	12.01	14.45	10.68	15.82	8.53
2/19/2024 11:00	68.62	8.53	6.94	9.33	6.69	11.09	5.28
2/19/2024 10:00	68.44	11.63	8.7	11.95	8.39	12.8	6.8
2/19/2024 9:00	66.23	-0.94	0.01	1.82	-0.02	-2.67	-0.01
2/19/2024 8:00	66.29	-0.94	0.01	1.83	-0.02	-2.63	-0.01
2/19/2024 7:00	66.37	-0.94	0.01	1.82	-0.02	-2.62	-0.01
2/19/2024 6:00	66.44	-0.94	0.01	1.82	-0.02	-2.62	-0.01
2/19/2024 5:00	66.54	-0.95	0.01	1.83	-0.02	-2.62	-0.01
2/19/2024 4:00	66.69	-0.95	0.01	1.81	-0.02	-2.55	-0.01
2/19/2024 3:00	66.84	-0.94	0.01	1.8	-0.02	-2.48	-0.01
2/19/2024 2:00	66.98	-0.95	0.01	1.8	-0.02	-2.48	-0.01
2/19/2024 1:00	67.14	-0.97	0.01	1.8	-0.02	-2.45	-0.01
2/19/2024 0:00	67.28	-0.96	0.01	1.81	-0.02	-2.39	-0.01
2/18/2024 23:00	67.41	-0.93	0.01	1.79	-0.02	-2.38	-0.01
2/18/2024 22:00	67.54	-0.93	0.01	1.8	-0.02	-2.38	-0.01
2/18/2024 21:00	67.69	-0.95	0.01	1.8	-0.02	-2.38	-0.01
2/18/2024 20:00	67.85	-0.95	0.01	1.8	-0.02	-2.38	-0.01
2/18/2024 19:00	67.99	-0.97	0.01	1.79	-0.02	-2.36	-0.01
2/18/2024 18:00	68.12	-1.03	0.01	1.77	-0.02	-2.14	-0.01
2/18/2024 17:00	68.24	-1.04	0.01	1.75	-0.02	-2.07	-0.01
2/18/2024 16:00	68.34	-1.05	0.01	1.75	-0.02	-2.03	-0.01
2/18/2024 15:00	68.41	-1.04	0.01	1.74	-0.02	-1.97	-0.01
2/18/2024 14:00	68.44	-1.05	0.01	1.74	-0.02	-1.98	-0.01
2/18/2024 13:00	68.51	-1.08	0.01	1.74	-0.02	-1.94	-0.01
2/18/2024 12:00	68.57	-1.09	0.01	1.73	-0.02	-1.86	-0.01
2/18/2024 11:00	68.65	-1.11	0.01	1.71	-0.02	-1.71	-0.01
2/18/2024 10:00	68.76	-1.14	0.01	1.68	-0.02	-1.55	-0.01
2/18/2024 9:00	68.92	-1.16	0.01	1.67	-0.02	-1.52	-0.01
2/18/2024 8:00	69.14	-1.25	0.01	1.6	-0.02	-1.5	-0.01
2/18/2024 7:00	69.43	-1.27	0.01	1.52	-0.02	-1.45	-0.01
2/18/2024 6:00	69.19	0.86	0.49	3.78	0.34	1.38	0.47
2/18/2024 5:00	69.38	12.42	10.07	11.66	9.39	11.93	6.76
2/18/2024 4:00	69.44	16.54	13.23	15.04	11.86	15.84	9.36
2/18/2024 3:00	69.44	16.6	13.22	14.98	11.85	15.78	9.32
2/18/2024 2:00	69.42	16.66	13.21	14.99	11.8	15.51	9.36
2/18/2024 1:00	69.42	16.62	13.23	14.35	11.82	15.63	9.34
2/18/2024 0:00	69.41	16.56	13.22	15	11.79	15.87	9.36
2/17/2024 23:00	69.42	16.48	13.23	15.05	11.81	16.12	9.3
2/17/2024 22:00	69.43	16.73	13.22	14.67	12.27	15.59	10.42
2/17/2024 21:00	69.43	16.75	13.35	15.15	12.03	14.92	9.61
2/17/2024 20:00	69.41	16.6	13.24	14.86	11.85	15.63	9.37
2/17/2024 19:00	69.4	16.47	13.21	14.93	11.8	16	9.27
2/17/2024 18:00	69.42	16.53	13.23	15.03	11.84	15.72	9.33

Data Table 3_hourly

Timestamps	ro tit 3100.output value	st1_dp.outp ut_value	st1_fx.outp ut_value	st2_op_dp.o utput_value	st2_fx.outp ut_value	st3_dp.outp ut_value	st3_fx.outp ut_value
2/17/2024 17:00	69.43	16.59	13.23	14.88	11.86	15.47	9.32
2/17/2024 16:00	69.51	16.57	13.21	15.09	11.81	15.44	9.35
2/17/2024 15:00	69.62	16.44	13.23	14.96	11.86	15.76	9.33
2/17/2024 14:00	69.77	16.36	13.23	14.98	11.82	16.04	9.3
2/17/2024 13:00	69.74	15.92	12.68	14.46	11.83	15.85	10.41
2/17/2024 12:00	69.06	-0.81	0.03	1.9	0.01	-2.24	0.04
2/17/2024 11:00	69.02	-0.92	0.01	1.83	-0.02	-2.48	-0.01
2/17/2024 10:00	68.98	-0.93	0.01	1.82	-0.02	-2.48	-0.01
2/17/2024 9:00	68.9	-0.91	0.01	1.8	-0.02	-2.48	-0.01
2/17/2024 8:00	69.01	-0.9	0.01	1.79	-0.02	-2.48	-0.01
2/17/2024 7:00	69.33	-0.9	0.01	1.8	-0.02	-2.48	-0.01
2/17/2024 6:00	69.36	-0.94	0.01	1.8	-0.02	-2.44	-0.01
2/17/2024 5:00	69.38	-1	0.01	1.79	-0.02	-2.19	-0.01
2/17/2024 4:00	69.41	-1.01	0.01	1.78	-0.02	-2.05	-0.01
2/17/2024 3:00	69.45	-1.02	0.01	1.78	-0.02	-2.02	-0.01
2/17/2024 2:00	69.46	-1.03	0.01	1.77	-0.02	-2.02	-0.01
2/17/2024 1:00	69.49	-1.03	0.01	1.77	-0.02	-2	-0.01
2/17/2024 0:00	69.51	-1.03	0.01	1.77	-0.02	-1.98	-0.01
2/16/2024 23:00	69.54	-1.04	0.01	1.76	-0.02	-1.95	-0.01
2/16/2024 22:00	69.58	-1.04	0.01	1.75	-0.02	-1.9	-0.01
2/16/2024 21:00	69.61	-1.06	0.01	1.75	-0.02	-1.8	-0.01
2/16/2024 20:00	69.63	-1.07	0.01	1.73	-0.02	-1.66	-0.01
2/16/2024 19:00	69.67	-1.08	0.01	1.72	-0.02	-1.61	-0.02
2/16/2024 18:00	69.74	-1.18	0.01	1.66	-0.02	-1.58	-0.01
2/16/2024 17:00	70.03	-0.25	0.24	2.76	0.26	-0.23	0.29
2/16/2024 16:00	69.92	14.91	11.5	14.18	10.06	14.83	7.6
2/16/2024 15:00	69.97	16.52	13.22	14.76	11.81	15.67	9.25
2/16/2024 14:00	69.97	16.46	13.26	15.08	11.86	15.79	9.37
2/16/2024 13:00	69.94	16.74	13.29	14.75	12.43	15.38	10.59
2/16/2024 12:00	69.94	16.56	13.24	14.95	11.81	15.5	9.34
2/16/2024 11:00	69.84	16.43	13.23	15	11.8	15.88	9.32
2/16/2024 10:00	69.59	16.45	13.23	14.84	11.8	15.7	9.37
2/16/2024 9:00	69.49	16.51	13.23	14.94	11.83	15.42	9.28
2/16/2024 8:00	69.61	9.04	7.44	9.91	7.79	10.01	6.09
2/16/2024 7:00	69.5	14.11	10.67	13.17	9.51	13.86	7.37
2/16/2024 6:00	69.5	16.62	13.25	14.6	12.3	15.89	10.27
2/16/2024 5:00	69.53	16.51	13.24	15.02	11.85	15.71	9.32
2/16/2024 4:00	69.55	16.59	13.22	14.85	11.84	15.44	9.28
2/16/2024 3:00	69.55	16.62	13.22	14.97	11.8	15.34	9.32
2/16/2024 2:00	69.57	16.53	13.25	14.19	11.82	15.46	9.34
2/16/2024 1:00	69.58	16.48	13.22	14.74	11.87	15.64	9.35
2/16/2024 0:00	69.58	16.51	13.23	14.85	11.8	15.54	9.31
2/15/2024 23:00	69.58	16.57	13.22	14.86	11.84	15.28	9.33
2/15/2024 22:00	69.61	16.53	13.24	14.24	11.87	15.33	9.34
2/15/2024 21:00	69.66	16.48	13.24	14.82	11.85	15.49	9.33
2/15/2024 20:00	69.63	16.55	13.34	14.83	12.48	15.53	10.63
2/15/2024 19:00	69.6	16.51	13.22	14.11	11.87	15.38	9.33
2/15/2024 18:00	69.67	16.46	13.24	14.76	11.81	15.17	9.34
2/15/2024 17:00	69.42	6.69	4.38	7.81	4.79	8	3.73
2/15/2024 16:00	69.42	-1.01	0.01	1.79	-0.02	-1.88	-0.01
2/15/2024 15:00	69.77	-1.04	0.01	1.77	-0.02	-1.72	-0.02

Data Table 3_hourly

Timestamps	ro tit 3100.output ut_value	st1_dp.outp ut_value	st1_fx.outp ut_value	st2_op_dp.o utput_value	st2_fx.outp ut_value	st3_dp.outp ut_value	st3_fx.outp ut_value
2/15/2024 14:00	69.75	-1.11	0.01	1.73	-0.02	-1.68	-0.01
2/15/2024 13:00	69.79	3.06	2	5.36	1.43	5.14	0.39
2/15/2024 12:00	69.84	16.47	13.26	14.82	12.38	15.8	10.5
2/15/2024 11:00	69.75	16.59	13.32	14.12	12	15.12	9.44
2/15/2024 10:00	69.64	16.44	13.23	14.83	11.81	15.21	9.28
2/15/2024 9:00	69.18	6.16	4.45	7.53	4.82	7.1	3.69
2/15/2024 8:00	69.35	2.74	1.78	5.21	1.9	3.12	1.03
2/15/2024 7:00	69.23	16.36	13.24	14.26	11.87	15.88	9.36
2/15/2024 6:00	69.09	16.48	13.23	14.16	11.82	15.63	9.32
2/15/2024 5:00	69.15	16.48	13.22	14.22	11.86	15.52	9.31
2/15/2024 4:00	69.18	16.47	13.24	14.18	11.8	15.48	9.31
2/15/2024 3:00	69.18	16.39	13.22	14.91	11.85	15.67	9.32
2/15/2024 2:00	69.22	16.36	13.23	14.26	11.87	15.75	9.35
2/15/2024 1:00	69.23	16.45	13.23	14.16	11.88	15.36	9.33
2/15/2024 0:00	69.18	14.98	11.77	13.76	11.24	14.6	9.6
2/14/2024 23:00	68.12	-0.93	0.01	1.8	-0.02	-2.25	-0.01
2/14/2024 22:00	68.34	-0.95	0.01	1.8	-0.02	-2.24	-0.01
2/14/2024 21:00	68.54	-0.95	0.01	1.82	-0.02	-2.24	-0.01
2/14/2024 20:00	68.74	-0.95	0.01	1.83	-0.02	-2.16	-0.01
2/14/2024 19:00	68.96	-0.96	0.01	1.82	-0.02	-2.13	-0.01
2/14/2024 18:00	69.22	-0.98	0.01	1.82	-0.02	-2.08	-0.01
2/14/2024 17:00	69.45	-0.99	0.01	1.81	-0.02	-2	-0.01
2/14/2024 16:00	69.61	-1	0.01	1.79	-0.02	-1.86	-0.01
2/14/2024 15:00	69.88	-1.05	0.01	1.77	-0.02	-1.85	-0.01
2/14/2024 14:00	70.12	-1.14	0.01	1.7	-0.01	-1.83	-0.01
2/14/2024 13:00	70.09	0.92	0.47	3.97	0.41	1.97	0.46
2/14/2024 12:00	69.82	7.59	6.22	8.37	5.91	8.3	3.53
2/14/2024 11:00	69.76	7.88	5.94	9.06	5.71	9.32	4.47
2/14/2024 10:00	69.65	9.17	7.46	9.91	7.67	11.78	6.08
2/14/2024 9:00	69.5	1.54	0.54	4.5	0.57	1.56	0.55
2/14/2024 8:00	69.14	1.71	1.84	3.98	2.22	1.71	1.36
2/14/2024 7:00	69.23	16.57	13.22	14.95	11.81	15.27	9.33
2/14/2024 6:00	69.34	16.43	13.23	15	11.81	15.56	9.3
2/14/2024 5:00	69.44	16.39	13.25	14.82	11.81	15.93	9.27
2/14/2024 4:00	69.43	16.46	13.22	15.07	11.85	15.47	9.33
2/14/2024 3:00	69.41	16.56	13.21	14.85	11.8	15.28	9.36
2/14/2024 2:00	69.4	16.71	13.32	14.86	12.48	14.86	10.63
2/14/2024 1:00	69.37	16.52	13.25	14.97	11.87	15.37	9.36
2/14/2024 0:00	69.34	16.42	13.23	14.37	11.8	15.65	9.3
2/13/2024 23:00	69.37	16.49	13.22	14.27	11.85	15.37	9.31
2/13/2024 22:00	69.43	16.51	13.22	14.91	11.8	15.24	9.22
2/13/2024 21:00	69.52	16.45	13.21	14.97	11.86	15.25	9.34
2/13/2024 20:00	69.59	16.39	13.23	14.16	11.82	15.6	9.32
2/13/2024 19:00	69.7	16.34	13.23	14.97	11.81	15.61	9.34
2/13/2024 18:00	69.78	16.5	13.22	14.65	11.86	15.19	9.26
2/13/2024 17:00	69.86	16.46	13.23	15.01	11.79	15.16	9.33
2/13/2024 16:00	69.9	16.53	13.22	14.64	12.3	15.44	10.48
2/13/2024 15:00	69.8	16.42	13.33	14.82	12.01	15.33	9.56
2/13/2024 14:00	69.85	16.45	13.21	14.8	11.86	15.45	9.29
2/13/2024 13:00	69.81	16.48	13.23	14.89	11.82	15.22	9.32
2/13/2024 12:00	69.76	16.47	13.23	14.18	11.91	15.35	9.34

Data Table 3_hourly

Timestamps	ro tit 3100.output ut_value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/13/2024 11:00	69.62	16.36	13.24	14.81	11.83	15.6	9.32
2/13/2024 10:00	69.43	16.42	13.23	14.84	11.84	15.66	9.27
2/13/2024 9:00	69.48	16.47	13.24	14.76	11.85	15.37	9.32
2/13/2024 8:00	69.36	16.47	13.22	15	11.85	15.5	9.41
2/13/2024 7:00	69.18	16.48	13.24	14.73	11.81	15.44	9.31
2/13/2024 6:00	69.17	16.37	13.35	15.04	12	15.65	9.62
2/13/2024 5:00	69.17	16.61	13.24	14.58	12.33	15.07	10.39
2/13/2024 4:00	69.14	16.45	13.21	14.9	11.8	15.25	9.32
2/13/2024 3:00	69.16	16.34	13.23	14.85	11.89	15.64	9.35
2/13/2024 2:00	69.25	16.36	13.24	14.81	11.83	15.48	9.31
2/13/2024 1:00	69.28	16.43	13.22	14.82	11.86	15.24	9.37
2/13/2024 0:00	69.27	16.45	13.24	14.75	11.88	15.13	9.35
2/12/2024 23:00	69.32	16.33	13.22	14.84	11.81	15.47	9.28
2/12/2024 22:00	69.38	16.22	13.23	14.82	11.86	15.75	9.31
2/12/2024 21:00	69.34	14.68	11.82	13.75	11.32	14.66	9.63
2/12/2024 20:00	69.03	0.99	0.53	3.92	0.47	1.15	0.49
2/12/2024 19:00	69.5	14.09	11.54	12.62	10.85	12.93	7.48
2/12/2024 18:00	69.51	16.36	13.22	14.14	11.88	15.31	9.3
2/12/2024 17:00	69.4	16.27	13.23	14.15	11.83	15.42	9.32
2/12/2024 16:00	69.21	10.14	7.53	11.09	7.21	11.34	6.27
2/12/2024 15:00	69.33	6.9	5.93	8.04	5.93	6.68	4.45
2/12/2024 14:00	69.04	16.51	13.22	14.93	11.85	15.36	9.27
2/12/2024 13:00	68.43	16.49	13.21	15.01	11.86	15.73	9.26
2/12/2024 12:00	68.03	16.44	13.21	14.95	11.85	15.98	9.31
2/12/2024 11:00	67.92	16.62	13.29	15.16	11.92	15.22	9.4
2/12/2024 10:00	67.67	16.68	13.29	14.85	12.44	15.13	10.6
2/12/2024 9:00	68.32	3.51	2.2	6.58	2.19	5.82	1.82
2/12/2024 8:00	67.46	16.4	13.09	15.11	11.72	15.55	9.09
2/12/2024 7:00	68.12	15.7	12.59	14.49	11.78	16.2	10.18
2/12/2024 6:00	64.83	-0.79	0.68	1.92	-0.02	-3.85	-3.25
2/12/2024 5:00	64.92	-0.78	0.69	1.91	-0.02	-3.97	-3.3
2/12/2024 4:00	65.02	-0.79	0.69	1.91	-0.02	-3.97	-3.3
2/12/2024 3:00	65.12	-0.79	0.69	1.91	-0.02	-3.96	-3.3
2/12/2024 2:00	65.21	-0.79	0.7	1.91	-0.02	-3.92	-3.3
2/12/2024 1:00	65.31	-0.79	0.7	1.91	-0.02	-3.92	-3.31
2/12/2024 0:00	65.4	-0.79	0.7	1.91	-0.02	-3.89	-3.31
2/11/2024 23:00	65.49	-0.79	0.7	1.91	-0.02	-3.81	-3.31
2/11/2024 22:00	65.58	-0.78	0.7	1.9	-0.02	-3.72	-3.32
2/11/2024 21:00	65.65	-0.77	0.7	1.91	-0.02	-3.68	-3.32
2/11/2024 20:00	65.71	-0.79	0.7	1.91	-0.02	-3.7	-3.32
2/11/2024 19:00	65.78	-0.77	0.7	1.91	-0.02	-3.71	-3.32
2/11/2024 18:00	65.83	-0.78	0.7	1.91	-0.02	-3.68	-3.33
2/11/2024 17:00	65.86	-0.78	0.7	1.91	-0.02	-3.68	-3.33
2/11/2024 16:00	65.87	-0.78	0.7	1.9	-0.02	-3.68	-3.33
2/11/2024 15:00	65.87	-0.78	0.7	1.91	-0.02	-3.66	-3.33
2/11/2024 14:00	65.84	-0.79	0.7	1.91	-0.02	-3.64	-3.33
2/11/2024 13:00	65.79	-0.8	0.7	1.89	-0.02	-3.57	-3.33
2/11/2024 12:00	65.76	-0.8	0.7	1.91	-0.02	-3.52	-3.32
2/11/2024 11:00	65.74	-0.83	0.7	1.91	-0.02	-3.49	-3.32
2/11/2024 10:00	65.74	-0.83	0.7	1.89	-0.02	-3.49	-3.31
2/11/2024 9:00	65.76	-0.81	0.7	1.87	-0.02	-3.49	-3.31

Data Table 3_hourly

Timestamps	ro tit 3100.output value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/11/2024 8:00	65.81	-0.79	0.7	1.87	-0.02	-3.45	-3.31
2/11/2024 7:00	65.93	-0.79	0.7	1.87	-0.02	-3.44	-3.31
2/11/2024 6:00	66.09	-0.79	0.7	1.88	-0.02	-3.42	-3.31
2/11/2024 5:00	66.27	-0.85	0.7	1.88	-0.02	-3.14	-3.31
2/11/2024 4:00	66.43	-0.86	0.7	1.87	-0.02	-3.05	-3.32
2/11/2024 3:00	66.61	-0.86	0.7	1.87	-0.02	-3.01	-3.32
2/11/2024 2:00	66.79	-0.88	0.7	1.87	-0.02	-2.98	-3.32
2/11/2024 1:00	66.97	-0.89	0.7	1.86	-0.02	-2.96	-3.33
2/11/2024 0:00	67.14	-0.89	0.7	1.87	-0.02	-2.91	-3.33
2/10/2024 23:00	67.32	-0.89	0.7	1.86	-0.02	-2.92	-3.33
2/10/2024 22:00	67.5	-0.89	0.7	1.86	-0.02	-2.89	-3.33

Data Table 4_hourly

Timestamps	ro ait 4101 ec.output_v alue	ro ait 4102 ec.output_v alue	ro ait 4103 ec.output_v alue	ro ait 4104 ec.output_v alue	ro ait 4109 ec.output_v alue	ro fit 4100.output _value	ro fit 4102.output _value	ro fit 4103.output _value	ro fit 4104.output _value	ro fit 4105.output _value	ro ait 4101 ph.output_v alue	ro ait 4109 ph.output_v alue	ro pit 4001.output _value	ro pit 4100.output _value	ro pit 4101.output _value	ro pit 4102.output _value
2/19/2024 20:00	30.1	29.34	28.36	30.53	2899.05	-0.62	-0.07	-0.01	-0.03	-0.18	6.8	6.8	NoData	3.28	3.2	3.22
2/19/2024 19:00	30.48	29.03	28.31	29.91	3033.19	-0.61	-0.07	-0.01	-0.02	-0.25	6.76	6.76	NoData	4.25	4.11	4.14
2/19/2024 18:00	33.59	32.54	41.8	28.36	3215.7	507.81	112.41	73.49	194.26	189.61	6.72	6.72	NoData	48.95	7.52	7.38
2/19/2024 17:00	28.72	28.24	33.79	23.69	3411.79	1706.77	480.81	254.28	191.22	365.48	6.73	6.73	NoData	135.64	11.97	11.59
2/19/2024 16:00	30.1	30.1	37.84	24.91	3630.39	1653.2	457.71	247.45	202.93	353.9	6.74	6.75	NoData	133.43	11.83	11.48
2/19/2024 15:00	29.95	31.16	39.87	25.41	3794.52	1643.82	455.21	246.62	207.06	354.69	6.77	6.77	NoData	133.33	10.82	10.47
2/19/2024 14:00	39.05	40.8	46.62	35.52	3919.19	964.24	205.12	103.21	105.57	149.06	6.78	6.78	NoData	71.29	7.15	5.83
2/19/2024 13:00	39.45	40.96	54.5	32.43	4063.74	489.27	104.15	69.61	211.31	214.15	6.82	6.82	NoData	39.64	6.79	6.81
2/19/2024 12:00	32.25	31.44	38	25.48	4194.53	1677.6	471.78	252.44	196.42	359.05	6.82	6.82	NoData	138.63	14.39	14.01
2/19/2024 11:00	31.47	31.61	40.62	25.67	4261.96	1644.88	454.3	246.7	206.94	355.45	6.78	6.78	NoData	133.93	12.26	11.91
2/19/2024 10:00	30.68	31.76	40.7	26.06	4270.41	1645.3	455.3	247.56	206.64	353.91	6.74	6.74	NoData	132.07	11.27	10.93
2/19/2024 9:00	62.4	71.64	55.3	49.53	4275.37	1002.62	205.68	117.58	113.55	163.76	6.8	6.8	NoData	68.88	7.32	6.14
2/19/2024 8:00	54.63	63.32	58.28	44.18	4274.2	286.75	52.01	42.94	123.94	111.89	6.86	6.86	NoData	32.25	3.96	3.79
2/19/2024 7:00	39.88	40.75	36.5	-0.04	4279.79	-0.65	-0.08	-0.01	-0.04	-0.16	6.85	6.85	NoData	2.21	1.87	1.89
2/19/2024 6:00	39.27	40.85	36.5	-0.04	4282.11	-0.65	-0.08	-0.01	-0.04	-0.17	6.85	6.85	NoData	2.21	1.87	1.88
2/19/2024 5:00	37.67	40.91	36.5	-0.04	4285.56	-0.65	-0.08	-0.01	-0.04	-0.19	6.84	6.84	NoData	2.21	1.86	1.88
2/19/2024 4:00	37.31	40.68	36.5	-0.04	4281.03	-0.65	-0.08	-0.01	-0.04	-0.18	6.84	6.84	NoData	2.21	1.86	1.88
2/19/2024 3:00	37.21	40.39	36.5	-0.04	4290.03	-0.65	-0.08	-0.01	-0.04	-0.21	6.83	6.83	NoData	2.25	1.87	1.88
2/19/2024 2:00	37.08	40	36.5	-0.04	4290.15	-0.63	-0.07	-0.01	-0.03	-0.17	6.82	6.82	NoData	2.25	1.87	1.88
2/19/2024 1:00	36.89	39.76	36.5	-0.04	4286.35	-0.62	-0.07	-0.01	-0.03	-0.21	6.81	6.81	NoData	2.25	1.86	1.88
2/19/2024 0:00	36.83	39.51	36.5	-0.04	4287.92	-0.62	-0.07	-0.01	-0.03	-0.2	6.8	6.8	NoData	2.25	1.87	1.88
2/18/2024 23:00	36.88	39.12	36.5	-0.04	4286.76	-0.62	-0.07	-0.01	-0.03	-0.19	6.79	6.79	NoData	2.29	1.87	1.88
2/18/2024 22:00	36.93	38.61	36.51	-0.03	4290.65	-0.63	-0.07	-0.01	-0.03	-0.19	6.77	6.77	NoData	2.29	1.87	1.88
2/18/2024 21:00	36.9	38.16	36.51	-0.03	4306	-0.63	-0.07	-0.01	-0.03	-0.21	6.76	6.76	NoData	2.3	1.86	1.88
2/18/2024 20:00	36.65	38.43	36.51	-0.03	4319	-0.63	-0.07	-0.01	-0.03	-0.19	6.76	6.76	NoData	2.33	1.86	1.88
2/18/2024 19:00	36.58	38.55	36.51	10.17	4338.82	-0.62	-0.07	-0.01	-0.03	-0.21	6.75	6.75	NoData	2.36	1.87	1.88
2/18/2024 18:00	37.08	38.7	36.52	38.2	4361.54	-0.62	-0.07	-0.01	-0.03	-0.19	6.73	6.73	NoData	2.41	1.88	1.89
2/18/2024 17:00	37	38.66	36.53	38.14	4380.32	-0.62	-0.07	-0.01	-0.03	-0.2	6.7	6.7	NoData	2.5	1.93	1.94
2/18/2024 16:00	36.83	38.67	36.53	38.24	4378.59	-0.62	-0.07	-0.01	-0.02	-0.17	6.69	6.69	NoData	2.64	1.99	1.99
2/18/2024 15:00	36.53	38.09	36.54	38.37	4372.55	-0.61	-0.07	-0.01	-0.02	-0.2	6.73	6.73	NoData	3.18	2.42	2.46
2/18/2024 14:00	36.49	38.02	36.82	38.64	4415.79	8.02	4.23	1.46	3.43	2.66	6.71	6.71	NoData	4.76	3.12	3.13
2/18/2024 13:00	32.3	30.65	25.95	23.65	4454.75	5.35	0.94	0.49	2.3	2.78	6.71	6.71	NoData	3.29	2.32	2.28
2/18/2024 12:00	29.9	28.24	25.61	23.29	4451.6	-0.62	-0.07	-0.01	-0.03	-0.14	6.72	6.72	NoData	2.06	1.92	1.93
2/18/2024 11:00	28.97	27.83	25.6	23.27	4448.45	-0.64	-0.07	-0.01	-0.03	-0.18	6.74	6.74	NoData	2.1	1.94	1.94
2/18/2024 10:00	29.24	27.64	25.58	23.28	4444.06	-0.63	-0.07	-0.01	-0.03	-0.19	6.68	6.68	NoData	2.11	1.97	1.98
2/18/2024 9:00	30.44	26.74	25.57	23.29	4403.48	-0.64	-0.08	-0.01	-0.04	-0.18	6.69	6.69	NoData	2.38	2.27	2.28
2/18/2024 8:00	28.56	26.75	25.58	24.35	4407.55	-0.65	0.26	0.16	-0.04	-0.2	6.71	6.71	NoData	2.95	2.79	2.81
2/18/2024 7:00	47.44	47.81	39.08	46.48	4399.58	89.14	20.24	11.99	130.45	110.49	6.68	6.68	NoData	12.58	5.46	5.37
2/18/2024 6:00	52.89	55.98	53.15	51.61	4434.84	16.78	7.43	2.68	6.26	6.51	6.7	6.7	NoData	5.95	3.72	3.77
2/18/2024 5:00	37.35	45.27	27.51	-0.04	4469.11	-0.64	-0.08	-0.01	-0.04	-0.21	6.71	6.71	NoData	1.98	1.86	1.88
2/18/2024 4:00	35.88	44.51	27.5	-0.04	4486.69	-0.64	-0.08	-0.01	-0.03	-0.17	6.73	6.73	NoData	1.98	1.86	1.88
2/18/2024 3:00	34.23	43.75	27.5	-0.04	4504.73	-0.65	-0.07	-0.01	-0.03	-0.14	6.75	6.75	NoData	1.98	1.86	1.88
2/18/2024 2:00	32.59	42.72	27.5	-0.04	4525.18	-0.65	-0.07	-0.01	-0.03	-0.17	6.77	6.77	NoData	1.98	1.86	1.88
2/18/2024 1:00	31.13	41.68	27.49	-0.04	4539.97	-0.63	-0.07	-0.01	-0.03	-0.22	6.8	6.8	NoData	1.98	1.86	1.88
2/18/2024 0:00	30.19	38.89	27.49	-0.04	4554.1	-0.62	-0.07	-0.01	-0.03	-0.19	6.84	6.84	NoData	1.98	1.86	1.88
2/17/2024 23:00	29.41	33.72	27.49	-0.03	4580.58	-0.62	-0.07	-0.01	-0.03	-0.2	6.85	6.85	NoData	1.98	1.86	1.88
2/17/2024 22:00	28.85	30.43	27.48	-0.03	4600.57	-0.62	-0.07	-0.01	-0.03	-0.2	6.85	6.85	NoData	1.99	1.86	1.88
2/17/2024 21:00	28.37	29.64	27.48	-0.03	4620.86	-0.62	-0.07	-0.01	-0.03	-0.2	6.84	6.84	NoData	2.02	1.87	1.88
2/17/2024 20:00	29.08	29.14	27.47	8.68	4641.82	-0.62	-0.07	-0.01	-0.03	-0.17	6.83	6.83	NoData	2.02	1.87	1.88
2/17/2024 19:00	29.1	29.16	27.47	22.59	4659.55	-0.62	-0.07	-0.01	-0.03	-0.21	6.82	6.82	NoData	2.02	1.88	1.89
2/17/2024 18:00	27.75	28.93	27.46	22.59	4675.55	-0.62	-0.07	0	-0.03	-0.15	6.83	6.83	NoData	2.05	1.9	1.91

Data Table 4_hourly

Timestamps	ro ait 4101 ec.output_v alue	ro ait 4102 ec.output_v alue	ro ait 4103 ec.output_v alue	ro ait 4104 ec.output_v alue	ro ait 4109 ec.output_v alue	ro fit 4100.output _value	ro fit 4102.output _value	ro fit 4103.output _value	ro fit 4104.output _value	ro fit 4105.output _value	ro ait 4101 ph.output_v alue	ro ait 4109 ph.output_v alue	ro pit 4001.output _value	ro pit 4100.output _value	ro pit 4101.output _value	ro pit 4102.output _value
2/17/2024 17:00	27.15	28.84	27.46	22.58	4693.69	-0.61	-0.07	0	-0.02	-0.22	6.84	6.84	NoData	2.07	1.93	1.94
2/17/2024 16:00	27.19	28.73	27.45	22.55	4718.21	-0.61	-0.06	0	-0.02	-0.21	6.76	6.76	NoData	2.13	1.98	1.99
2/17/2024 15:00	27.68	28.22	27.43	22.58	4727.87	-0.61	-0.06	0	-0.02	-0.19	6.75	6.75	NoData	2.23	2.09	2.11
2/17/2024 14:00	28.93	27.85	27.41	22.69	4763.82	-0.6	-0.06	0	-0.02	-0.18	6.75	6.75	NoData	2.87	2.69	2.7
2/17/2024 13:00	32.82	32.23	37.84	28.34	4859.61	483.51	109.67	61.19	158.19	171.63	6.76	6.76	NoData	50.33	7.55	7.12
2/17/2024 12:00	29.34	29.51	36.73	24.87	5017.53	1652	456.2	250.11	203.71	353.48	6.75	6.75	NoData	131.03	11.69	11.31
2/17/2024 11:00	29.39	29.73	37.57	25.05	4925.1	1645.84	455.19	247.47	205.71	354.93	6.74	6.74	NoData	130.02	11.78	11.43
2/17/2024 10:00	30.57	30.47	38.62	25.37	5089.67	1646.38	455.29	247.58	205.56	354.45	6.75	6.75	NoData	129.37	11.15	10.79
2/17/2024 9:00	31.34	31.13	37.66	26.21	5186.49	1686.52	473.33	252.46	193.75	368.02	6.85	6.85	NoData	130.82	10.56	10.19
2/17/2024 8:00	51.17	48.19	47.37	39.44	5184.16	277.42	57.8	32.48	158.61	162.63	6.9	6.9	NoData	23.29	5.92	5.37
2/17/2024 7:00	30.69	30.6	38.63	25.45	5318.41	1646.15	455.18	247.33	205.45	354.32	6.92	6.91	NoData	129.64	10.52	10.16
2/17/2024 6:00	30	30.71	39.07	25.58	5312.58	1646.43	454.6	247.33	205.4	354.75	6.92	6.92	NoData	129.5	10.51	10.16
2/17/2024 5:00	29.92	30.92	39.13	25.57	5336.11	1647.22	455.47	247.91	205.64	354.85	6.92	6.92	NoData	129.8	10.52	10.16
2/17/2024 4:00	30.62	31.05	39.11	25.53	5363.32	1646.1	455.43	249.05	206.25	353.59	6.92	6.92	NoData	130.34	10.53	10.16
2/17/2024 3:00	30.98	31.07	39.16	25.62	5391.66	1645.8	455.29	247.81	205.85	355.02	6.92	6.92	NoData	129.61	10.52	10.17
2/17/2024 2:00	31.02	30.84	39.3	25.64	5372.09	1645.57	455.12	247.3	206.29	356.05	6.56	6.56	NoData	129.11	10.52	10.16
2/17/2024 1:00	29.51	30.74	38.87	25.58	5407.8	1668.53	461.51	249.57	201.36	353.95	6.67	6.67	NoData	129.82	10.56	10.2
2/17/2024 0:00	30.21	30.44	36.7	25.21	5485.42	1687.46	476.18	252.81	193.75	365.79	6.91	6.91	NoData	131.17	10.6	10.21
2/16/2024 23:00	31.07	31.2	39.21	25.86	5577.24	1646.06	453.77	248.99	205.67	356.28	6.93	6.93	NoData	129.08	10.53	10.16
2/16/2024 22:00	31.43	31.04	39.5	25.76	5678.03	1644.9	455.06	247.71	205.72	354.96	6.95	6.95	NoData	128.63	10.52	10.17
2/16/2024 21:00	30.28	30.96	39.3	25.73	5721.37	1646.31	455.21	246.73	205.76	354.1	6.74	6.74	NoData	128.12	10.51	10.17
2/16/2024 20:00	30.37	31.12	39.42	25.63	5611.17	1645.4	455.01	248.64	206.23	354.71	6.53	6.53	NoData	128.94	10.51	10.15
2/16/2024 19:00	31.69	31.7	39.72	26.1	5320.71	1646.42	455.4	249.75	205.14	355.27	6.64	6.64	NoData	129.86	11.07	10.71
2/16/2024 18:00	36.28	34.89	36.83	32.8	5529.53	1352.43	339.05	179.43	165.72	281.68	6.73	6.73	NoData	96.77	10.05	9.78
2/16/2024 17:00	76.31	80.64	89.45	64.97	5512.73	104.61	26.07	14.66	149.98	144.79	6.54	6.54	NoData	13.51	5.65	5.68
2/16/2024 16:00	30.44	31.06	39.11	26.15	5623.68	1599.85	429.49	234.25	199.21	336.31	6.58	6.58	NoData	121.78	11.14	10.85
2/16/2024 15:00	29.81	30.67	38.62	25.66	5681.83	1644.31	454.52	247.63	205.93	354.74	6.76	6.76	NoData	129.68	11.98	11.62
2/16/2024 14:00	30.3	30.59	38.23	25.54	5837.66	1645.55	454.4	249.98	205.87	355.22	6.84	6.84	NoData	130.15	11.92	11.57
2/16/2024 13:00	30.97	30.66	38.19	25.57	6173.35	1644.19	455.76	248.65	206.17	354.38	6.57	6.57	NoData	130.04	12.04	11.7
2/16/2024 12:00	30.68	30.62	38.45	25.89	6348.08	1677.93	465.48	249.79	199.66	361.79	6.92	6.92	NoData	130.15	12.06	11.7
2/16/2024 11:00	29.98	30.84	37.36	25.96	6397.34	1678.3	472.14	248.57	196.15	358.69	6.54	6.54	NoData	130.77	12.05	11.69
2/16/2024 10:00	30.32	31.07	39.41	25.61	6162.67	1644.85	454.34	249.25	206.51	355.63	6.47	6.47	NoData	131.25	11.99	11.62
2/16/2024 9:00	31.32	31.28	39.59	25.53	5458.72	1645.55	455	249.59	206.07	354.58	6.83	6.83	NoData	131	11.98	11.63
2/16/2024 8:00	39.45	37.36	37.34	27.24	5710.69	986.6	226.6	114.41	111.97	164.29	6.77	6.77	NoData	72.74	7.7	7.52
2/16/2024 7:00	46.53	36.33	36.52	26.47	5833.23	-0.62	-0.07	-0.01	-0.03	-0.16	6.86	6.86	NoData	2.52	2.36	2.39
2/16/2024 6:00	38.27	37.67	36.6	31.53	5992.55	-0.6	-0.06	0.21	-0.02	-0.2	6.93	6.93	NoData	2.96	2.81	2.83
2/16/2024 5:00	46.14	49.59	52.97	35.11	6144.81	791.24	196.07	105.58	192.51	237.2	6.9	6.9	NoData	60.44	8.07	8.11
2/16/2024 4:00	28.51	28.76	36.89	23.02	6221.44	1644.41	454.28	250.14	206.45	354.72	6.99	6.99	NoData	132.01	11.99	11.62
2/16/2024 3:00	29.23	28.89	36.95	23.07	6288.59	1643.98	454.39	249.19	206.44	354.5	7.02	7.02	NoData	131.58	11.96	11.62
2/16/2024 2:00	28.7	28.62	36.92	23.16	6415.82	1659.51	458.45	248.33	203.48	353.65	6.94	6.94	NoData	131.2	12.01	11.65
2/16/2024 1:00	28.57	27.84	34.38	22.74	6441.36	1696.69	478.98	250.38	192.42	366.28	6.45	6.45	NoData	131.82	12.1	11.72
2/16/2024 0:00	29.11	28.73	37.06	22.97	6520.54	1646.26	454.25	249.22	206.16	355.09	6.52	6.52	NoData	131.63	11.98	11.63
2/15/2024 23:00	29.07	29.17	37.37	23.33	6722.86	1645.21	454.78	248.12	206.29	354.25	6.68	6.68	NoData	131.05	11.98	11.63
2/15/2024 22:00	30.64	30.3	38.91	24.67	6807.5	1644.51	454.61	247.51	206.08	354.34	7.05	7.05	NoData	130.43	11.98	11.63
2/15/2024 21:00	30.8	31.47	40.33	25.97	6756.92	1645.51	454.85	246.72	206.19	355.01	7.09	7.09	NoData	129.91	11.98	11.63
2/15/2024 20:00	30.42	31.44	40.1	25.82	6649.64	1646.12	455.06	247.81	205.33	354.07	6.38	6.38	NoData	130.15	12.05	11.7
2/15/2024 19:00	30.71	31.22	39.53	25.64	6484.47	1645.11	454.87	248.92	206.18	354.79	6.46	6.46	NoData	130.16	11.99	11.63
2/15/2024 18:00	30.9	31.05	39.24	25.69	6526.55	1646.73	455.61	248	205.78	356.05	6.67	6.67	NoData	128.91	11.93	11.58
2/15/2024 17:00	35.4	35.95	40.78	31.01	6000.18	1582.43	433.97	230.67	195.36	354.12	6.81	6.81	NoData	117.93	10.65	10.31
2/15/2024 16:00	47.76	42.94	41.49	34.97	6516.27	194.12	39.88	23.41	115.34	117.74	7.01	7.01	NoData	16.62	5.04	5.05
2/15/2024 15:00	35.75	38.15	41.77	32.99	6729.13	1229.18	319.07	177.52	180.81	273.13	7.1	7.1	NoData	91.49	9.52	9.11

Data Table 4_hourly

Timestamps	ro ait 4101 ec.output_v alue	ro ait 4102 ec.output_v alue	ro ait 4103 ec.output_v alue	ro ait 4104 ec.output_v alue	ro ait 4109 ec.output_v alue	ro fit 4100.output _value	ro fit 4102.output _value	ro fit 4103.output _value	ro fit 4104.output _value	ro fit 4105.output _value	ro ait 4101 ph.output_v alue	ro ait 4109 ph.output_v alue	ro pit 4001.output _value	ro pit 4100.output _value	ro pit 4101.output _value	ro pit 4102.output _value
2/15/2024 14:00	31.28	31.46	39.65	26.18	6940.17	1646.09	454.69	249.45	205.78	355.24	6.56	6.56	NoData	128.99	11.91	11.54
2/15/2024 13:00	31.58	31.47	39.94	26.11	7214.29	1646.1	454.55	247.65	206.61	354.06	6.76	6.76	NoData	127.98	11.21	10.81
2/15/2024 12:00	31.81	31.41	39.72	26.26	7161.48	1645.25	455.03	246.45	206.13	354.45	7.16	7.16	NoData	130.86	14.03	13.69
2/15/2024 11:00	30.3	31.38	39.99	26.11	7313.04	1661.49	459.19	247.94	202.54	353.4	6.84	6.84	NoData	131.18	13.8	13.46
2/15/2024 10:00	30.88	31.03	37.66	25.56	6317.25	1694.13	477.87	253.29	192.6	366.55	7.03	NoData	133.69	14.37	13.98	
2/15/2024 9:00	45.85	42.58	40.85	34.24	2995.39	522.37	98.24	57.29	91.48	114.18	7.28	7.28	NoData	42.29	6.5	6.03
2/15/2024 8:00	39.49	38.61	45.62	32.66	5981.16	808.17	173.73	104.01	168.25	186.21	7.17	7.17	NoData	63.12	7.61	7.45
2/15/2024 7:00	29.11	29.05	35.64	24.02	6095.05	1701.21	480.71	249.83	191.59	365.49	7.15	7.15	NoData	131.76	12.11	11.74
2/15/2024 6:00	28.72	30.16	38.58	24.71	6367.97	1645.83	454.98	246.3	205.43	356.57	6.78	6.78	NoData	130	11.97	11.63
2/15/2024 5:00	28.63	29.45	37.88	23.47	6428.83	1645.8	454.92	248.56	206.84	354.63	7.07	7.07	NoData	131.52	12	11.63
2/15/2024 4:00	29.64	29.66	38.15	23.49	6443.56	1645.32	454.75	248.42	206.52	354.06	7.15	7.15	NoData	131.41	11.99	11.64
2/15/2024 3:00	29.23	29.22	37.73	23.34	6502.57	1646.99	455.04	247.08	205.85	353.8	6.93	6.93	NoData	130.37	11.98	11.62
2/15/2024 2:00	28.22	29.04	37.67	23.34	6639.02	1645	455.56	246.25	206.63	354.79	7.27	7.27	NoData	129.49	11.98	11.63
2/15/2024 1:00	27.97	29.09	37.69	23.21	6712.18	1644.74	454.96	246.94	206.01	354.83	7.23	NoData	130.15	11.98	11.64	
2/15/2024 0:00	29.8	30.25	38.69	24.1	6695.24	1645.17	454.74	249.18	206.54	354.93	6.88	6.88	NoData	130.4	11.73	11.35
2/14/2024 23:00	30.67	30.46	39.07	24.13	6836.01	1646.25	454.93	248.35	206.63	354.41	7.34	7.34	NoData	129.78	11.42	11.09
2/14/2024 22:00	30.28	30.4	39.32	24.3	6793.18	1658.57	458.34	247.02	204.04	353.23	7.07	7.07	NoData	129.95	12.02	11.66
2/14/2024 21:00	29.63	30.61	37.77	25.2	7086.99	1698.74	479.83	247.99	192.31	365.93	7.08	NoData	129.99	12.1	11.74	
2/14/2024 20:00	31.07	31.69	40.42	25.64	7059.08	1645.86	454.46	248.1	206.46	355.35	7.16	7.16	NoData	129.73	11.99	11.62
2/14/2024 19:00	33.53	33.63	42.07	27.59	6773.21	1651.5	460.35	248.9	204.23	359.82	7.08	7.08	NoData	128.95	11.91	11.56
2/14/2024 18:00	54.25	56.17	71.53	38.31	3900.5	796.42	193.82	107.32	197.09	253.86	7.19	7.19	NoData	60.21	8.58	7.92
2/14/2024 17:00	26.81	33	65.66	21.02	5664.4	1082.87	280.38	151.96	131.28	185.86	7.16	NoData	78.2	8.78	8.36	
2/14/2024 16:00	40.08	40.73	45.14	35.2	6102.74	1354.25	337.95	180.13	170.64	285.31	6.71	6.71	NoData	93.54	8.75	8.54
2/14/2024 15:00	65.14	51.63	53.53	32.85	5412.1	268.38	50.86	31.08	155.75	155.52	6.99	6.99	NoData	24.08	6	6.77
2/14/2024 14:00	31.27	29.45	37.26	22.82	6859.12	1314.56	304.42	157.89	121.57	211.19	7	7	NoData	79.22	8.65	8.47
2/14/2024 13:00	35.4	32.96	39.84	28.17	5699.27	953.43	224	121.3	115.17	181.2	7.44	7.44	NoData	71.72	7.83	7.67
2/14/2024 12:00	24.02	22.7	29.81	16.69	6897.15	964.61	216.99	114.98	90.65	139.39	6.79	6.79	NoData	61.31	7.87	8.45
2/14/2024 11:00	48.08	47.16	52.28	37.38	4447.35	602.8	136.19	80.91	203.99	233.36	6.91	6.91	NoData	43.07	7.6	7.66
2/14/2024 10:00	38.19	39.19	45.62	32.27	5098.64	1023.27	230.77	135.89	163.05	203.5	6.48	6.48	NoData	73.37	8.58	8.55
2/14/2024 9:00	37.3	39.13	40.26	33.84	6453.79	334.6	59.28	31.71	49.36	55.66	6.25	NoData	24.48	3.94	4.28	
2/14/2024 8:00	37.59	36.56	41.1	30.6	6863.54	1455.03	385.38	192.65	169.18	290.97	6.28	6.28	NoData	97.05	9.62	9.23
2/14/2024 7:00	46.91	48.94	34.22	12.11	3598.38	724.45	156.3	81.63	92	118.79	6.97	6.97	NoData	58.02	7.92	8.08
2/14/2024 6:00	52.15	54.76	30.4	-0.04	3346.45	-0.63	-0.08	-0.01	-0.03	-0.17	7.13	7.13	NoData	2.02	1.87	1.88
2/14/2024 5:00	51.31	53.74	30.39	-0.04	3356.99	-0.63	-0.07	-0.01	-0.04	-0.17	7.11	7.11	NoData	2.02	1.87	1.88
2/14/2024 4:00	50.88	53.12	30.39	-0.04	3356.22	-0.63	-0.08	-0.01	-0.04	-0.2	7.07	7.07	NoData	2.02	1.87	1.88
2/14/2024 3:00	50.87	52.99	30.38	-0.04	3350.97	-0.63	-0.08	-0.01	-0.04	-0.2	7.04	7.04	NoData	2.02	1.87	1.88
2/14/2024 2:00	51.32	53.19	30.38	-0.04	3355.45	-0.64	-0.08	-0.01	-0.04	-0.17	7	7	NoData	2.02	1.87	1.88
2/14/2024 1:00	51.84	53.71	30.38	-0.04	3345.9	-0.64	-0.08	-0.01	-0.04	-0.18	6.94	6.94	NoData	2.02	1.87	1.88
2/14/2024 0:00	52.13	54.4	30.39	-0.04	3341.34	-0.63	-0.07	-0.01	-0.04	-0.2	6.89	6.89	NoData	2.02	1.87	1.88
2/13/2024 23:00	52.55	55.17	30.4	-0.04	3352.42	-0.64	-0.07	-0.01	-0.04	-0.18	6.86	6.86	NoData	2.02	1.87	1.88
2/13/2024 22:00	53.3	55.99	30.41	-0.04	3372.96	-0.62	-0.07	-0.01	-0.03	-0.21	6.85	6.85	NoData	2.02	1.87	1.88
2/13/2024 21:00	53.73	55.5	30.41	-0.03	3397.31	-0.62	-0.07	-0.01	-0.03	-0.17	6.83	6.83	NoData	2.02	1.87	1.88
2/13/2024 20:00	53.72	51.79	30.42	6.05	3427.25	-0.61	-0.06	-0.01	-0.02	-0.16	6.82	6.82	NoData	2.02	1.87	1.88
2/13/2024 19:00	52.66	55.99	30.43	24.04	3456.48	-0.61	-0.07	0	-0.02	-0.2	6.82	6.82	NoData	2.02	1.88	1.89
2/13/2024 18:00	48.95	53.09	30.43	24.04	3474.35	-0.6	-0.06	0	-0.02	-0.22	6.82	6.82	NoData	2.06	1.91	1.91
2/13/2024 17:00	50.15	48.92	30.42	24.03	3495.96	-0.59	-0.06	0	-0.02	-0.17	6.8	6.8	NoData	2.07	1.93	1.94
2/13/2024 16:00	54.23	49.11	30.41	24.03	3505.36	-0.6	-0.06	0	-0.02	-0.21	6.78	6.78	NoData	2.1	1.95	1.96
2/13/2024 15:00	55.01	49.21	30.39	24.03	3508.51	-0.6	-0.06	0	-0.02	-0.2	6.75	6.75	NoData	2.11	1.97	1.98
2/13/2024 14:00	53.91	46.92	30.38	24.02	3499.86	-0.61	-0.06	0	-0.02	-0.19	6.73	6.73	NoData	2.14	1.98	1.99
2/13/2024 13:00	50.06	44.35	30.35	23.98	3466.74	-0.61	-0.07	0	-0.02	-0.21	6.67	6.67	NoData	2.14	1.99	1.99
2/13/2024 12:00	41.44	43.25	30.3	23.93	3360.43	-0.62	-0.07	-0.01	-0.03	-0.17	6.6	6.6	NoData	2.14	1.99	2

Data Table 4_hourly

Timestamps	ro ait 4101 ec.output_v alue	ro ait 4102 ec.output_v alue	ro ait 4103 ec.output_v alue	ro ait 4104 ec.output_v alue	ro ait 4109 ec.output_v alue	ro fit 4100.output _value	ro fit 4102.output _value	ro fit 4103.output _value	ro fit 4104.output _value	ro fit 4105.output _value	ro ait 4101 ph.output_v alue	ro ait 4109 ph.output_v alue	ro pit 4001.output _value	ro pit 4100.output _value	ro pit 4101.output _value	ro pit 4102.output _value
2/13/2024 11:00	33.94	37.6	30.26	23.89	3161.21	-0.62	-0.07	-0.01	-0.03	-0.21	6.49	6.49	NoData	2.14	2	2
2/13/2024 10:00	32.27	33.87	30.23	23.88	3483.57	-0.64	-0.07	-0.01	-0.04	-0.2	6.79	6.79	NoData	2.13	2.01	2.02
2/13/2024 9:00	37.8	31.17	30.2	23.87	4105.71	-0.63	-0.07	-0.01	-0.04	-0.18	6.97	6.97	NoData	2.36	2.28	2.24
2/13/2024 8:00	40.91	30.21	30.19	23.96	5217.28	-0.64	-0.08	-0.01	-0.04	-0.18	7.04	7.04	NoData	2.9	2.76	2.78
2/13/2024 7:00	38.14	36.15	41.91	31.62	6628.84	367.45	73.69	41.57	151.49	154.07	6.94	6.94	NoData	38.63	6.32	6.77
2/13/2024 6:00	32.21	33.43	41.96	27.92	6954.76	1646.5	455.29	245.75	205.79	354.72	6.97	6.97	NoData	128.33	12.02	11.66
2/13/2024 5:00	32.8	33.51	41.98	27.94	6967.78	1645.85	455.72	246.35	205.39	353.31	6.87	6.87	NoData	128.81	12.04	11.68
2/13/2024 4:00	33.16	33.61	42.39	28.07	7031.3	1645.25	454.93	245.08	206.3	354.93	6.91	6.91	NoData	128.1	11.99	11.64
2/13/2024 3:00	32.59	32.96	41.51	27.73	6997.24	1645.81	454.93	244.96	205.93	354.32	7	7	NoData	127.48	11.99	11.65
2/13/2024 2:00	31.27	32.74	41.17	27.71	6746.55	1645.45	454.98	244.41	205.94	354.3	6.98	6.98	NoData	126.83	11.99	11.65
2/13/2024 1:00	32.29	33.07	41.21	27.58	6882.43	1677.61	465.92	250.26	199.87	360.31	6.91	6.91	NoData	129.61	12.1	11.71
2/13/2024 0:00	33.18	33.42	40.24	28.18	7434.43	1677.16	471.8	247.46	195.95	358.47	6.85	6.85	NoData	128.64	12.07	11.71
2/12/2024 23:00	33.58	33.48	42.33	28.15	7120.85	1646.04	454.42	244.95	205.66	355.42	6.98	6.98	NoData	127.11	11.99	11.65
2/12/2024 22:00	32.27	33.54	42.49	28.14	7096.92	1644.11	454.8	244.04	206.56	354.45	7.02	7.02	NoData	126.34	11.92	11.57
2/12/2024 21:00	32.7	33.65	42.44	27.67	7165.85	1646.42	455.26	246.58	205.38	353.26	7.02	7.02	NoData	127.11	11.7	11.33
2/12/2024 20:00	37.43	37.67	45.28	30.84	5972.73	1006.78	263.02	140.88	234.04	315.18	7.01	7.01	NoData	73.88	8.97	8.83
2/12/2024 19:00	34.39	34.52	43.27	28.72	7323.37	1630.7	451.87	242.73	205.33	350.71	7.02	7.02	NoData	125.39	11.67	11.32
2/12/2024 18:00	33.39	34.08	43.07	28.51	7500.18	1645.31	455.52	243.58	205.25	354.4	6.85	6.85	NoData	125.93	11.99	11.64
2/12/2024 17:00	32.48	33.92	43.02	28.12	7541.06	1644.91	454.99	244.34	206.22	354.66	6.51	6.51	NoData	126.26	11.98	11.63
2/12/2024 16:00	33.48	33.92	40.97	28.23	7669.19	1690.02	474.96	249.47	193.18	367.11	5.84	5.84	NoData	127.43	11.28	10.87
2/12/2024 15:00	36.54	36.82	46.27	29.6	6394.76	891.66	232.44	132.96	246.44	302.13	6.81	6.81	NoData	72.03	9.43	9.36
2/12/2024 14:00	32.97	33.5	42.48	27.75	7091.12	1645.92	455.38	243.6	205.4	354.12	7.09	7.09	NoData	127.58	12.2	11.85
2/12/2024 13:00	30.97	32.56	41.16	27.25	6222.5	1648.65	454.99	243.76	205.95	353.74	6.85	6.85	NoData	128.41	12.21	11.85
2/12/2024 12:00	30.95	32.2	39.78	27.08	6026.23	1689.77	473.94	250.82	197.04	367.98	7.11	7.11	NoData	131.67	12.35	11.96
2/12/2024 11:00	31.63	31.86	38.18	27.09	5863.73	1665.73	463.62	248.86	199.26	352.89	6.74	6.74	NoData	130.16	12.06	11.69
2/12/2024 10:00	29.8	30.9	37.88	27.09	5221.18	1624.53	452.55	236.52	226.87	387.43	7.16	7.16	NoData	124.97	11.81	11.46
2/12/2024 9:00	28.28	30	36.46	26.97	4901.03	1612.1	453.04	231.89	239.74	405.47	7.17	7.17	NoData	121.48	10.54	10.2
2/12/2024 8:00	27.38	28.73	34.64	25.57	4893.5	1612.42	452.89	234.86	239.32	405.23	7.02	7.02	NoData	123.65	11.68	11.33
2/12/2024 7:00	29.88	31.88	32.53	27.6	2293.86	1165.75	266.64	145.42	151.69	235.09	6.68	6.68	NoData	96.35	8.35	8.74
2/12/2024 6:00	28.41	34.1	30.41	35.61	299.62	-0.67	-0.09	-0.02	-0.05	-0.18	7.23	7.23	NoData	2.16	2.05	2.06
2/12/2024 5:00	28.42	33.92	30.3	35.55	296.21	-0.66	-0.09	-0.02	-0.05	-0.17	7.23	7.23	NoData	2.16	2.05	2.06
2/12/2024 4:00	28.47	33.64	30.22	35.25	294.58	-0.66	-0.09	-0.02	-0.05	-0.18	7.23	7.23	NoData	2.17	2.05	2.07
2/12/2024 3:00	28.53	33.32	30.14	34.9	292.19	-0.65	-0.09	-0.02	-0.05	-0.14	7.26	7.26	NoData	2.17	2.05	2.07
2/12/2024 2:00	28.58	32.86	30.06	34.4	288.28	-0.65	-0.08	-0.02	-0.05	-0.17	7.3	7.3	NoData	2.17	2.05	2.06
2/12/2024 1:00	28.65	32.45	29.97	33.98	286.3	-0.65	-0.08	-0.01	-0.04	-0.16	7.31	7.31	NoData	2.17	2.04	2.06
2/12/2024 0:00	28.72	31.97	29.9	33.47	285.42	-0.66	-0.08	-0.02	-0.05	-0.14	7.31	7.31	NoData	2.17	2.04	2.06
2/11/2024 23:00	28.81	31.72	29.83	33.26	282.68	-0.65	-0.08	-0.02	-0.04	-0.17	7.3	7.3	NoData	2.17	2.04	2.06
2/11/2024 22:00	28.9	31.61	29.79	33.17	281.77	-0.65	-0.08	-0.01	-0.04	-0.19	7.32	7.32	NoData	2.17	2.05	2.06
2/11/2024 21:00	28.99	31.62	29.74	33.07	277.43	-0.63	-0.08	-0.01	-0.04	-0.2	7.34	7.34	NoData	2.17	2.05	2.06
2/11/2024 20:00	29.13	30.94	29.68	32.43	275.93	-0.63	-0.08	-0.01	-0.04	-0.18	7.37	7.37	NoData	2.17	2.05	2.07
2/11/2024 19:00	29.28	30.9	29.65	32.48	275.59	-0.63	-0.07	-0.01	-0.04	-0.2	7.41	7.41	NoData	2.17	2.06	2.07
2/11/2024 18:00	29.41	31.3	29.63	32.93	274.91	-0.62	-0.07	-0.01	-0.03	-0.21	7.44	7.44	NoData	2.17	2.07	2.08
2/11/2024 17:00	29.53	31.62	29.6	33.22	275.17	-0.62	-0.07	-0.01	-0.03	-0.15	7.48	7.48	NoData	2.19	2.07	2.08
2/11/2024 16:00	29.58	31.49	29.56	33.02	275.2	-0.61	-0.07	-0.01	-0.03	-0.2	7.49	7.49	NoData	2.21	2.07	2.08
2/11/2024 15:00	29.57	31.06	29.51	32.55	276.54	-0.61	-0.07	-0.01	-0.03	-0.18	7.5	7.5	NoData	2.22	2.07	2.08
2/11/2024 14:00	29.49	30.47	29.48	31.93	275.86	-0.62	-0.07	-0.01	-0.03	-0.2	7.5	7.5	NoData	2.21	2.08	2.09
2/11/2024 13:00	29.35	30.1	29.46	31.57	271.68	-0.62	-0.07	-0.01	-0.03	-0.19	7.49	7.49	NoData	2.21	2.1	2.11
2/11/2024 12:00	29.14	29.89	29.43	31.36	268.99	-0.63	-0.07	-0.01	-0.03	-0.17	7.47	7.47	NoData	2.25	2.12	2.13
2/11/2024 11:00	28.9	29.56	29.4	31	266.82	-0.64	-0.08	-0.01	-0.04	-0.17	7.45	7.45	NoData	2.28	2.15	2.16
2/11/2024 10:00	28.68	29.49	29.36	30.94	261.7	-0.65	-0.08	-0.01	-0.04	-0.27	7.44	7.44	NoData	2.3	2.19	2.21
2/11/2024 9:00	28.49	29.31	29.33	30.76	254.56	-0.65	-0.08	-0.02	-0.04	-0.17	7.36	7.36	NoData	2.37	2.25	2.27

Data Table 4_hourly

Timestamps	ro ait 4101 ec.output_v alue	ro ait 4102 ec.output_v alue	ro ait 4103 ec.output_v alue	ro ait 4104 ec.output_v alue	ro ait 4109 ec.output_v alue	ro fit 4100.output _value	ro fit 4102.output _value	ro fit 4103.output _value	ro fit 4104.output _value	ro fit 4105.output _value	ro ait 4101 ph.output_v alue	ro ait 4109 ph.output_v alue	ro pit 4001.output _value	ro pit 4100.output _value	ro pit 4101.output _value	ro pit 4102.output _value
2/11/2024 8:00	28.3	29.37	29.32	30.83	242.19	-0.65	-0.09	-0.02	-0.05	-0.18	7.27	7.27	NoData	2.44	2.31	2.33
2/11/2024 7:00	28.2	29.23	29.3	30.63	231.62	-0.65	-0.09	-0.02	-0.05	-0.18	7.21	7.21	NoData	2.5	2.38	2.39
2/11/2024 6:00	28.23	29.06	29.25	30.48	226.88	-0.65	-0.09	-0.01	-0.05	-0.15	7.17	7.17	NoData	2.61	2.49	2.5
2/11/2024 5:00	28.32	28.78	29.21	30.16	226.8	-0.65	-0.08	-0.01	-0.05	-0.23	7.13	7.13	NoData	2.81	2.68	2.7
2/11/2024 4:00	28.39	28.6	29.16	29.99	224.84	-0.66	-0.08	-0.02	-0.05	-0.22	7.1	7.1	NoData	2.86	2.74	2.76
2/11/2024 3:00	28.45	28.66	29.12	30.09	223.88	-0.65	-0.08	-0.01	-0.04	-0.17	7.06	7.06	NoData	2.88	2.76	2.78
2/11/2024 2:00	28.54	28.78	29.05	30.22	223	-0.65	-0.08	-0.01	-0.04	-0.15	7.03	7.03	NoData	2.91	2.78	2.79
2/11/2024 1:00	28.63	28.99	28.99	30.44	221.12	-0.65	-0.08	-0.01	-0.04	-0.19	6.99	6.99	NoData	2.91	2.79	2.81
2/11/2024 0:00	28.71	29.22	28.93	30.66	221.94	-0.64	-0.08	-0.01	-0.04	-0.2	6.96	6.96	NoData	2.91	2.8	2.82
2/10/2024 23:00	28.8	29.54	28.89	31.01	220.63	-0.63	-0.08	0.22	-0.04	-0.21	6.98	6.98	NoData	2.94	2.81	2.83
2/10/2024 22:00	28.9	29.8	28.85	31.25	222.77	-0.63	-0.08	0.12	-0.03	-0.21	6.95	6.95	NoData	2.94	2.83	2.85

Data Table 4_hourly

Timestamps	ro pit 4103.output _value	ro pit 4104.output _value	ro pit 4105.output _value	ro pit 4106.output _value	ro pit 4107.output _value	ro pit 4200.output _value	ro tit 4100.output _value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/19/2024 20:00	5.23	4.51	4.73	3.48	3.9	84.91	69.56	-1.94	0	-0.19	0	-0.41	-0.01
2/19/2024 19:00	5.96	5.27	5.42	4.44	4.83	84.87	69.76	-1.87	0	-0.21	0	-0.41	-0.01
2/19/2024 18:00	42.74	53.3	43.04	49.19	39.07	84.88	69.85	5.45	3.4	7.43	2.99	8.73	1.13
2/19/2024 17:00	118.26	142.43	127.39	147.21	131.6	84.88	69.56	17.38	13.34	15.07	12.49	15.65	10.55
2/19/2024 16:00	116.3	141	126.84	152.53	136.7	84.88	69.48	17.23	13.25	14.08	11.9	16.17	9.12
2/19/2024 15:00	116.13	141.43	127.13	152.36	136.71	84.87	69.32	17.22	13.22	14.3	11.83	15.96	8.98
2/19/2024 14:00	60.75	67.8	61.59	72.15	68.06	84.89	69.47	5.83	4.68	6.38	5.23	8.58	3.63
2/19/2024 13:00	34.08	38.24	32.37	37.44	29.67	84.84	69.76	4.42	3.03	6.47	2.68	9.39	1.28
2/19/2024 12:00	121.36	146.44	131.77	154.46	138.95	84.9	69.52	17.31	13.23	14.72	12.26	15.6	9.88
2/19/2024 11:00	116.73	141.37	127.19	152.42	135.84	84.86	69.37	17.21	13.2	14.15	11.79	16.45	9.06
2/19/2024 10:00	114.94	139.37	125.01	149.16	133.54	84.88	69.58	17.22	13.23	14.3	11.83	15.81	8.94
2/19/2024 9:00	57.05	70.36	60.63	72.68	66.98	84.85	69.62	6.22	5.15	6.82	5.72	8.46	4.09
2/19/2024 8:00	27.89	25.65	21.06	14.56	6.27	84.9	68.54	1.63	1.87	3.27	1.35	8.86	0.26
2/19/2024 7:00	4.26	3.62	3.76	2.42	2.86	84.88	67.2	-2.05	-0.01	-0.13	0	-0.44	-0.01
2/19/2024 6:00	4.26	3.62	3.77	2.42	2.86	84.9	67.32	-2.05	-0.01	-0.15	0	-0.44	-0.01
2/19/2024 5:00	4.26	3.62	3.75	2.42	2.86	84.9	67.47	-2.05	0	-0.13	0	-0.44	-0.01
2/19/2024 4:00	4.27	3.62	3.77	2.42	2.86	84.89	67.63	-2.05	-0.01	-0.15	0	-0.44	-0.01
2/19/2024 3:00	4.27	3.62	3.79	2.44	2.86	84.89	67.81	-2.02	-0.01	-0.17	0	-0.43	-0.01
2/19/2024 2:00	4.29	3.63	3.79	2.47	2.86	84.88	67.98	-2.04	-0.01	-0.15	0	-0.39	-0.01
2/19/2024 1:00	4.29	3.66	3.79	2.47	2.86	84.9	68.11	-2.04	-0.01	-0.13	0	-0.39	-0.01
2/19/2024 0:00	4.3	3.66	3.8	2.47	2.91	84.91	68.28	-2.05	-0.01	-0.14	0	-0.44	-0.01
2/18/2024 23:00	4.32	3.66	3.83	2.47	2.93	84.87	68.45	-2.03	0	-0.17	0	-0.46	-0.01
2/18/2024 22:00	4.32	3.67	3.83	2.5	2.96	84.9	68.64	-2.03	-0.01	-0.16	0	-0.47	-0.01
2/18/2024 21:00	4.34	3.7	3.84	2.52	2.98	84.9	68.82	-2.05	-0.01	-0.14	0	-0.46	-0.01
2/18/2024 20:00	4.37	3.7	3.86	2.52	3.01	84.9	69	-2.03	0	-0.17	0	-0.49	-0.01
2/18/2024 19:00	4.39	3.73	3.88	2.56	3.03	84.87	69.18	-2.03	0	-0.15	0	-0.48	-0.01
2/18/2024 18:00	4.44	3.78	3.93	2.6	3.08	84.9	69.37	-2.03	0	-0.15	0	-0.48	-0.01
2/18/2024 17:00	4.54	3.87	4.01	2.69	3.17	84.92	69.56	-2.03	-0.01	-0.15	0	-0.48	-0.01
2/18/2024 16:00	4.66	3.99	4.15	2.84	3.32	84.91	69.82	-2.02	-0.01	-0.16	0	-0.49	-0.01
2/18/2024 15:00	5.15	4.44	4.63	3.38	3.92	84.9	70.03	-1.97	0	-0.15	0	-0.48	-0.01
2/18/2024 14:00	6.51	5.73	5.73	4.6	4.66	84.9	70.18	-1.78	0	-0.04	0.11	-0.28	0.01
2/18/2024 13:00	4.97	4.52	4.56	3.17	3.13	84.87	69.32	-1.94	0.02	-0.05	0.02	-0.27	0.02
2/18/2024 12:00	4.13	3.5	3.64	2.3	2.71	84.91	69.41	-2.07	-0.01	-0.14	0	-0.41	-0.01
2/18/2024 11:00	4.15	3.51	3.67	2.33	2.72	84.9	69.55	-2.05	-0.01	-0.17	0	-0.39	-0.01
2/18/2024 10:00	4.16	3.51	3.68	2.33	2.73	84.89	69.73	-2.05	-0.01	-0.16	0	-0.4	-0.01
2/18/2024 9:00	4.45	3.77	3.96	2.62	3.03	84.89	69.96	-2.04	-0.01	-0.17	0	-0.42	-0.01
2/18/2024 8:00	4.94	4.24	4.42	3.14	3.58	84.92	70.25	-2	-0.01	-0.18	0	-0.43	-0.01
2/18/2024 7:00	11.89	13.31	9.32	11.06	5.77	84.88	70.07	0.7	0.36	3.47	0.51	3.81	0.6
2/18/2024 6:00	7.48	6.58	6.76	5.37	5.38	84.89	69.57	-1.65	0	0.02	0.2	0.02	0.06
2/18/2024 5:00	4.03	3.47	3.56	2.23	2.86	84.85	67.78	-2.05	-0.01	-0.09	0	-0.63	-0.01
2/18/2024 4:00	4.03	3.47	3.56	2.23	2.86	84.85	67.88	-2.05	-0.01	-0.09	0	-0.63	-0.01
2/18/2024 3:00	4.04	3.47	3.56	2.23	2.86	84.84	68.04	-2.05	-0.01	-0.09	0	-0.63	-0.01
2/18/2024 2:00	4.04	3.47	3.56	2.23	2.86	84.85	68.18	-2.05	0	-0.09	0	-0.63	-0.01
2/18/2024 1:00	4.04	3.47	3.56	2.23	2.86	84.86	68.39	-2.05	-0.01	-0.09	0	-0.63	-0.01
2/18/2024 0:00	4.06	3.47	3.57	2.23	2.86	84.85	68.57	-2.08	0	-0.1	0	-0.63	-0.01
2/17/2024 23:00	4.06	3.47	3.58	2.23	2.87	84.85	68.74	-2.08	0	-0.12	0	-0.63	-0.01
2/17/2024 22:00	4.06	3.47	3.6	2.23	2.87	84.87	68.89	-2.07	0	-0.13	0	-0.63	-0.01
2/17/2024 21:00	4.09	3.47	3.6	2.27	2.74	84.87	69.04	-2.07	0	-0.13	0	-0.45	-0.01
2/17/2024 20:00	4.09	3.47	3.6	2.28	2.64	84.87	69.25	-2.07	-0.01	-0.13	0	-0.36	-0.01
2/17/2024 19:00	4.09	3.49	3.6	2.28	2.63	84.87	69.45	-2.07	0	-0.11	0	-0.35	-0.01
2/17/2024 18:00	4.12	3.51	3.64	2.28	2.68	84.84	69.66	-2.07	-0.01	-0.13	0	-0.39	-0.01

Data Table 4_hourly

Timestamps	ro pit 4103.output _value	ro pit 4104.output _value	ro pit 4105.output _value	ro pit 4106.output _value	ro pit 4107.output _value	ro pit 4200.output _value	ro tit 4100.output _value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/17/2024 17:00	4.14	3.52	3.65	2.33	2.68	84.87	69.88	-2.07	0	-0.13	0	-0.35	-0.01
2/17/2024 16:00	4.19	3.57	3.7	2.36	2.74	84.87	70.1	-2.07	0	-0.13	0	-0.38	-0.01
2/17/2024 15:00	4.29	3.65	3.81	2.48	2.84	84.86	70.28	-2.06	0	-0.14	0	-0.36	-0.01
2/17/2024 14:00	4.88	4.23	4.36	3.08	3.49	84.86	70.46	-2.02	0	-0.15	0	-0.41	-0.01
2/17/2024 13:00	41.01	47.55	35.71	41.86	36.25	84.84	70.52	4.64	2.55	6.73	2.88	6.79	2.1
2/17/2024 12:00	113.71	134.03	119.74	134.08	117.83	84.89	70.17	17.29	13.27	14.26	11.87	16.44	9.08
2/17/2024 11:00	112.79	134.73	120.62	138.62	122.14	84.85	70.14	17.28	13.21	14.16	11.81	16.59	9.08
2/17/2024 10:00	112.17	134.1	119.66	137.89	121.89	84.86	70.27	17.31	13.21	14.36	11.82	16.17	9.06
2/17/2024 9:00	113.61	136.38	121.78	138.56	121.88	84.93	70.3	17.01	13.18	14.55	12.29	16.66	10.56
2/17/2024 8:00	20.48	23.96	18.94	21.04	15.29	84.9	70.53	2.23	1.29	4.48	1.47	6.41	1.38
2/17/2024 7:00	112.35	134.87	120.74	138.23	121.9	84.91	70.25	17.33	13.22	14.18	11.83	16.39	9.04
2/17/2024 6:00	112.17	134.77	120.53	139.36	123.58	84.89	70.27	17.36	13.23	14.19	11.81	16.21	9.06
2/17/2024 5:00	112.61	134.97	120.62	137.81	121.31	84.89	70.29	17.26	13.22	14.21	11.84	16.51	9
2/17/2024 4:00	113.2	134.89	120.74	136.21	119.09	84.88	70.32	17.21	13.2	14.12	11.82	17.06	9.07
2/17/2024 3:00	112.44	134.39	120.17	137.62	121.2	84.92	70.35	17.24	13.23	14.33	11.82	16.69	9.06
2/17/2024 2:00	111.8	134.33	120.34	137.58	121.81	84.9	70.37	17.35	13.22	14.01	11.82	16.16	9.02
2/17/2024 1:00	112.35	135.54	121.01	140.68	125.03	84.91	70.4	17.42	13.37	14.48	11.98	15.98	9.29
2/17/2024 0:00	113.92	137.15	122.59	138.85	122.4	84.92	70.43	17.27	13.19	14.5	12.37	16.56	10.41
2/16/2024 23:00	111.91	133.08	118.82	136.83	119.72	84.92	70.46	17.15	13.21	14.36	11.8	17.16	9.06
2/16/2024 22:00	111.41	133.52	119.56	137.37	121.15	84.87	70.48	17.27	13.21	14.08	11.83	16.33	9.01
2/16/2024 21:00	110.88	133.36	119.19	138.33	122.7	84.88	70.47	17.29	13.22	14.22	11.82	16.11	9
2/16/2024 20:00	111.79	133.37	119.25	136.31	119.99	84.89	70.43	17.16	13.22	14.12	11.82	16.63	8.99
2/16/2024 19:00	112.83	133.85	119.71	135.88	119.43	84.88	70.43	17.05	13.2	14.14	11.83	16.7	9.11
2/16/2024 18:00	84.3	102.26	88.84	102.52	90.3	84.92	70.38	11.91	9.27	11.52	8.76	13.34	7.52
2/16/2024 17:00	12.24	14.38	10.69	10.91	6.8	84.84	70.72	1.05	0.44	3.62	0.66	4.28	0.72
2/16/2024 16:00	105.83	126.85	113.68	131.3	118.95	84.85	70.53	16.13	12.45	13.3	11.25	15.58	8.24
2/16/2024 15:00	112.49	134.29	120.07	137.54	121.25	84.86	70.62	17.25	13.23	14.2	11.82	16.4	9.03
2/16/2024 14:00	112.99	133.54	119.47	134.39	117.74	84.87	70.6	17.16	13.2	14.08	11.81	16.92	9.02
2/16/2024 13:00	112.83	133.46	119.07	134.37	118.15	84.89	70.58	17.2	13.22	14.3	11.82	16.4	8.97
2/16/2024 12:00	112.88	136.25	121.89	141.77	125.2	84.85	70.56	17.29	13.33	14.35	12.1	16.52	9.81
2/16/2024 11:00	113.41	137.27	122.65	145.76	130.45	84.87	70.47	17.38	13.22	14.63	12.25	15.46	9.91
2/16/2024 10:00	114.13	135.75	121.67	139.41	122.61	84.89	70.23	17.1	13.22	14.04	11.81	16.83	9.04
2/16/2024 9:00	114.01	134.85	120.64	138.17	122.01	84.92	70.15	17.06	13.22	14.23	11.82	16.44	9.01
2/16/2024 8:00	61.68	74.69	63.38	81.05	66.96	84.9	70.13	7.71	5.22	7.77	5.73	9.76	4.16
2/16/2024 7:00	4.53	3.94	4.13	2.7	3.12	84.87	70.22	-2.06	-0.01	-0.17	0	-0.38	-0.01
2/16/2024 6:00	4.98	4.33	4.5	3.16	3.58	84.87	70.48	-2.03	0	-0.18	0	-0.41	-0.01
2/16/2024 5:00	51.96	62	53.23	62.97	53.03	84.86	70.39	7.33	4.98	8.59	4.98	9.39	3.47
2/16/2024 4:00	114.83	135.81	121.45	136.83	119.9	84.86	70.24	17.21	13.22	14.24	11.82	17.08	8.99
2/16/2024 3:00	114.36	136.06	122.01	137.41	120.89	84.89	70.24	17.24	13.23	13.99	11.82	16.52	8.95
2/16/2024 2:00	113.88	136.9	122.51	142.59	126.19	84.86	70.26	17.34	13.33	14.38	11.91	16.51	9.11
2/16/2024 1:00	114.43	139.69	125.11	147.07	131.43	84.88	70.27	17.46	13.24	14.56	12.44	15.65	10.54
2/16/2024 0:00	114.55	135.4	121.07	138.34	121.09	84.87	70.26	17.15	13.23	14.33	11.79	17.05	9.11
2/15/2024 23:00	113.84	135.81	121.61	138.87	121.41	84.88	70.26	17.17	13.22	14.03	11.82	17.02	8.98
2/15/2024 22:00	113.16	135.51	121.26	140.46	124.3	84.87	70.29	17.27	13.21	14.17	11.82	16.36	9.04
2/15/2024 21:00	112.6	135.35	121.26	141.02	125.16	84.86	70.35	17.33	13.22	14.12	11.82	16.09	9
2/15/2024 20:00	112.98	134.94	120.71	139.05	122.6	84.88	70.33	17.2	13.23	14.15	11.82	16.41	9.02
2/15/2024 19:00	113.05	133.91	119.7	136.43	119.42	84.9	70.31	17.11	13.22	14.23	11.82	17.01	9.01
2/15/2024 18:00	111.77	133.07	118.91	136.25	119.86	84.88	70.35	17.17	13.2	14.08	11.84	16.6	9.04
2/15/2024 17:00	102.8	123.43	110.46	129.06	115.59	84.89	70.46	15.68	12.05	14.04	11.37	15.72	9.65
2/15/2024 16:00	15.33	17.64	13.98	14.4	9.73	84.88	70.85	0.96	0.92	3.3	0.94	4.78	0.97
2/15/2024 15:00	80.37	94.95	83.93	92.5	82.65	84.86	70.69	11.85	9.13	10.38	8.31	12.72	5.63

Data Table 4_hourly

Timestamps	ro pit 4103.output _value	ro pit 4104.output _value	ro pit 4105.output _value	ro pit 4106.output _value	ro pit 4107.output _value	ro pit 4200.output _value	ro tit 4100.output _value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/15/2024 14:00	111.91	132.46	118.3	134.06	117.22	84.86	70.72	17.15	13.22	14.18	11.82	17.14	9.04
2/15/2024 13:00	110.83	132.55	118.57	136.23	119.5	84.86	70.62	17.15	13.23	14.03	11.8	16.9	8.99
2/15/2024 12:00	113.65	135.57	121.22	140.5	124.97	84.82	70.48	17.26	13.21	14.27	11.81	16.06	8.96
2/15/2024 11:00	113.81	136.48	122.37	142.37	126.49	84.91	70.41	17.33	13.35	14.01	11.92	15.93	9.12
2/15/2024 10:00	116.62	138.93	124.04	143.73	127.28	84.9	70.32	17.06	13.22	14.89	12.41	16.45	10.54
2/15/2024 9:00	36.11	42.35	33.49	41.97	30.2	84.88	70.14	2.9	2.51	4.3	2.6	8.19	1.99
2/15/2024 8:00	52.67	69.46	56.01	66.03	55.82	84.92	70.19	6.93	4.76	7.34	4.61	9.9	2.07
2/15/2024 7:00	114.44	139.3	124.32	147.55	131.29	84.95	70.04	17.33	13.29	14.97	12.49	16.23	10.54
2/15/2024 6:00	112.67	135.45	121.4	143.46	127.35	84.94	69.94	17.28	13.2	14.05	11.81	16.14	9.06
2/15/2024 5:00	114.43	135.78	121.39	139.04	122.24	84.96	69.98	17.13	13.22	14.3	11.81	16.94	9.02
2/15/2024 4:00	114.31	135.67	121.58	138.52	122.17	84.98	70.02	17.16	13.22	14.1	11.82	16.58	8.98
2/15/2024 3:00	113.17	134.93	120.71	140.68	124.09	84.95	70.03	17.19	13.2	14.23	11.82	16.5	9.03
2/15/2024 2:00	112.31	134.77	120.54	141.5	125.17	84.94	70.07	17.24	13.22	14.2	11.82	16.32	8.95
2/15/2024 1:00	112.93	134.7	120.62	140	123.94	84.95	70.04	17.21	13.21	14.13	11.83	16.34	9.01
2/15/2024 0:00	113.33	134.05	119.76	137.03	120.49	84.92	70.09	17.1	13.22	14.29	11.8	16.88	8.93
2/14/2024 23:00	112.73	134.56	120.53	139.24	123.05	84.95	70.15	17.13	13.22	14.03	11.82	16.28	8.97
2/14/2024 22:00	112.75	135.68	121.29	143.99	128.13	84.9	70.26	17.2	13.32	14.36	11.9	16.23	9.07
2/14/2024 21:00	112.73	138.14	123.57	149.99	134.81	84.97	70.31	17.27	13.26	14.58	12.46	15.25	10.52
2/14/2024 20:00	112.74	133.39	118.97	139.3	122.71	84.92	70.17	16.97	13.23	14.37	11.8	16.72	9.01
2/14/2024 19:00	112.03	132.92	118.87	137.42	121.41	84.92	70.05	16.95	13.16	14.19	11.96	16.23	9.42
2/14/2024 18:00	51.24	61.69	51.99	64.7	53.44	84.91	70.33	7.22	5.07	9.02	4.97	10.83	4.22
2/14/2024 17:00	68.08	80.88	73.99	87.42	81.85	84.87	70.31	8.7	7.12	7.89	7.12	8.84	4.17
2/14/2024 16:00	80.25	97.52	86.99	103.33	96.91	84.86	70.55	11.72	9.33	10.87	9.02	12.83	7.21
2/14/2024 15:00	21.54	24.3	19.17	22.03	15.55	84.9	70.68	2.05	1.37	4.78	1.37	5.92	1.29
2/14/2024 14:00	67.22	81.13	75.96	86.5	81.28	84.91	70.64	8.98	7.56	9.09	7.93	9.74	5.82
2/14/2024 13:00	62.64	76.36	61.3	75.84	66.6	84.92	70.54	7.15	5.75	8.2	5.81	9.65	4.66
2/14/2024 12:00	55.13	65.5	60.49	68.9	70.94	84.91	70.47	5.55	4.95	6.06	5.36	6.7	3.71
2/14/2024 11:00	39.01	44.42	36.85	42.44	37.07	84.89	70.53	5.12	3.63	7.79	3.63	10.24	2.72
2/14/2024 10:00	61.45	72.18	65.4	73.67	67.53	84.85	70.37	7.97	6.48	7.54	5.74	10.54	3.05
2/14/2024 9:00	22.14	24.87	22.64	25.52	20.66	84.85	70.06	0.49	1.38	2.24	1.56	3.08	0.9
2/14/2024 8:00	84.38	102.4	91.16	110.68	101.38	84.84	70.08	12.11	9.61	11.63	9.84	12.99	7.5
2/14/2024 7:00	61.12	52.29	59.05	73.49	48.05	84.88	68.37	5.2	3.52	5.82	4.24	7.84	2.81
2/14/2024 6:00	4.09	3.66	3.75	2.33	2.86	84.9	67.61	-2.07	-0.01	-0.09	0	-0.54	-0.01
2/14/2024 5:00	4.09	3.66	3.75	2.33	2.86	84.93	67.67	-2.07	-0.01	-0.09	0	-0.54	-0.01
2/14/2024 4:00	4.09	3.66	3.74	2.33	2.86	84.91	67.7	-2.07	0	-0.08	0	-0.54	-0.01
2/14/2024 3:00	4.09	3.64	3.73	2.33	2.86	84.92	67.75	-2.07	-0.01	-0.08	0	-0.54	-0.01
2/14/2024 2:00	4.1	3.62	3.71	2.33	2.86	84.9	67.87	-2.08	-0.01	-0.09	0	-0.54	-0.01
2/14/2024 1:00	4.1	3.62	3.71	2.32	2.86	84.93	67.98	-2.08	-0.01	-0.09	0	-0.54	-0.01
2/14/2024 0:00	4.09	3.62	3.71	2.33	2.86	84.91	68.13	-2.07	-0.01	-0.09	0	-0.54	-0.01
2/13/2024 23:00	4.09	3.62	3.71	2.33	2.86	84.93	68.32	-2.07	0	-0.09	0	-0.54	-0.01
2/13/2024 22:00	4.09	3.62	3.71	2.33	2.86	84.89	68.52	-2.07	-0.01	-0.09	0	-0.54	-0.01
2/13/2024 21:00	4.09	3.62	3.71	2.33	2.87	84.92	68.69	-2.07	0	-0.09	0	-0.54	-0.01
2/13/2024 20:00	4.09	3.63	3.71	2.33	2.9	84.93	68.82	-2.07	0	-0.08	0	-0.57	-0.01
2/13/2024 19:00	4.11	3.66	3.74	2.34	2.92	84.94	68.92	-2.09	0	-0.08	0	-0.58	-0.01
2/13/2024 18:00	4.13	3.68	3.76	2.38	2.92	84.92	68.98	-2.07	0	-0.08	0	-0.54	-0.01
2/13/2024 17:00	4.16	3.7	3.79	2.38	2.92	84.92	69.01	-2.09	0	-0.09	0	-0.54	-0.01
2/13/2024 16:00	4.19	3.73	3.81	2.41	2.91	84.93	69.01	-2.08	0	-0.08	0	-0.49	-0.01
2/13/2024 15:00	4.21	3.74	3.83	2.43	2.83	84.93	69.02	-2.1	-0.01	-0.09	0	-0.4	-0.01
2/13/2024 14:00	4.21	3.74	3.83	2.43	2.79	84.92	69.01	-2.07	-0.01	-0.09	0	-0.36	-0.01
2/13/2024 13:00	4.21	3.74	3.83	2.43	2.77	84.92	68.96	-2.07	-0.01	-0.09	0	-0.35	-0.01
2/13/2024 12:00	4.21	3.74	3.83	2.43	2.77	84.94	68.94	-2.07	0	-0.09	0	-0.34	-0.01

Data Table 4_hourly

Timestamps	ro pit 4103.output _value	ro pit 4104.output _value	ro pit 4105.output _value	ro pit 4106.output _value	ro pit 4107.output _value	ro pit 4200.output _value	ro tit 4100.output _value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/13/2024 11:00	4.21	3.74	3.83	2.42	2.77	84.94	69	-2.07	0	-0.09	0	-0.34	-0.01
2/13/2024 10:00	4.23	3.74	3.83	2.44	2.76	84.95	69.18	-2.1	-0.01	-0.09	0	-0.33	-0.01
2/13/2024 9:00	4.5	3.92	4.03	2.63	2.99	84.94	69.44	-2.1	0	-0.11	0	-0.33	-0.01
2/13/2024 8:00	4.98	4.4	4.52	3.15	3.53	84.92	69.77	-2.08	-0.01	-0.13	0	-0.37	-0.01
2/13/2024 7:00	29.12	32.39	27.33	34.16	25.93	84.92	70.13	3.72	1.81	5.81	2.01	5.96	1.27
2/13/2024 6:00	111.28	132.31	117.94	138.41	122.08	84.96	70	17.13	13.23	14.23	11.81	16.34	8.97
2/13/2024 5:00	111.66	132.21	117.86	137.59	120.72	84.96	69.99	17.09	13.23	14.23	11.83	16.73	9.05
2/13/2024 4:00	111.01	132.15	117.98	139.19	122.65	84.97	69.96	17.16	13.22	14.14	11.82	16.37	9.01
2/13/2024 3:00	110.29	131.43	117.11	138.48	123.04	84.92	69.97	17.24	13.22	14.29	11.83	15.88	9
2/13/2024 2:00	109.62	130.66	116.52	136.96	121.5	84.93	70.03	17.23	13.23	14.03	11.83	15.96	8.99
2/13/2024 1:00	112.48	133.24	118.44	137.21	120.38	84.94	70.07	17.18	13.34	14.78	12.11	16.88	9.82
2/13/2024 0:00	111.5	133.91	119.61	141.85	125.73	84.93	70.06	17.16	13.23	14.28	12.26	16.28	9.87
2/12/2024 23:00	109.9	130.56	116.27	138.33	122.59	84.9	70.1	17.17	13.22	14.41	11.81	15.96	9.04
2/12/2024 22:00	109.19	130.38	116.3	137.73	122.05	84.91	70.14	17.17	13.22	14.07	11.82	15.89	8.96
2/12/2024 21:00	110.05	130.14	115.81	135.45	119.41	84.93	70.12	17.03	13.22	14.24	11.82	16.38	8.98
2/12/2024 20:00	63.83	77.49	65.16	77.82	67.82	84.91	70.22	9.92	7.06	10.83	6.76	13.82	5.63
2/12/2024 19:00	108.52	128.78	114.71	134.4	118.48	84.92	70.28	16.86	13.07	13.99	11.74	16.03	8.87
2/12/2024 18:00	108.84	130.45	116.15	139.64	123.53	84.92	70.25	17.13	13.2	14.32	11.83	16.32	9.04
2/12/2024 17:00	109.19	130.36	116.32	137.93	122.29	84.93	70.13	17.16	13.22	14.01	11.83	16.04	8.97
2/12/2024 16:00	110.4	131.69	116.69	138.37	121.82	84.9	70.22	16.97	13.21	14.96	12.34	16.38	10.55
2/12/2024 15:00	62.5	71.73	63.84	72.58	61.48	84.87	69.59	9.84	6.97	10.33	6.11	13.83	3.9
2/12/2024 14:00	110.36	132.12	117.69	141.4	125.4	84.92	69.72	17.21	13.21	14.38	11.83	16.28	9.01
2/12/2024 13:00	111.16	132.08	117.91	139.38	123.6	84.92	69.08	17.33	13.23	14.12	11.82	15.98	8.95
2/12/2024 12:00	114.38	134.61	119.38	137.54	120.73	84.94	68.67	17.31	13.26	15.19	12.3	17.06	10.35
2/12/2024 11:00	112.81	131.84	117.62	134.84	119.21	84.96	68.55	17.4	13.3	14.26	12.03	15.72	9.28
2/12/2024 10:00	107.33	128.5	112.45	139.13	119.99	84.95	68.3	17.66	12.83	15.8	11.76	19.03	9.75
2/12/2024 9:00	103.53	126.13	109.84	138.29	118.49	84.96	68.29	17.88	12.6	16.2	11.77	19.9	10.04
2/12/2024 8:00	105.94	126.88	110.52	135.35	115.05	84.96	68.08	17.73	12.61	16.4	11.77	20.59	10.12
2/12/2024 7:00	77.71	84.22	74.23	88.68	79.97	84.97	67.1	11.19	6.68	10.72	7.08	14.48	5.98
2/12/2024 6:00	4.26	3.81	3.86	2.51	2.8	84.88	65.17	-2.09	-0.01	-0.05	0	-0.29	-0.01
2/12/2024 5:00	4.26	3.83	3.86	2.51	2.8	84.86	65.28	-2.09	-0.01	-0.03	0	-0.29	-0.01
2/12/2024 4:00	4.26	3.85	3.86	2.51	2.8	84.87	65.4	-2.09	-0.01	-0.02	0	-0.29	-0.01
2/12/2024 3:00	4.26	3.85	3.88	2.51	2.8	84.85	65.52	-2.09	-0.01	-0.03	0	-0.29	-0.01
2/12/2024 2:00	4.26	3.82	3.86	2.51	2.81	84.88	65.63	-2.09	-0.01	-0.04	0	-0.29	-0.01
2/12/2024 1:00	4.26	3.81	3.86	2.51	2.81	84.85	65.74	-2.09	-0.01	-0.05	0	-0.29	-0.01
2/12/2024 0:00	4.26	3.81	3.86	2.51	2.81	84.88	65.85	-2.09	-0.01	-0.05	0	-0.29	-0.01
2/11/2024 23:00	4.26	3.83	3.86	2.52	2.81	84.86	65.96	-2.09	-0.01	-0.04	0	-0.29	-0.01
2/11/2024 22:00	4.26	3.82	3.86	2.52	2.81	84.88	66.06	-2.09	0	-0.04	0	-0.29	-0.01
2/11/2024 21:00	4.26	3.85	3.87	2.52	2.81	84.87	66.16	-2.09	-0.01	-0.02	0	-0.29	-0.01
2/11/2024 20:00	4.27	3.85	3.9	2.52	2.81	84.87	66.24	-2.1	-0.01	-0.05	0	-0.29	-0.01
2/11/2024 19:00	4.29	3.85	3.9	2.52	2.81	84.89	66.32	-2.12	-0.01	-0.05	0	-0.29	-0.01
2/11/2024 18:00	4.29	3.85	3.9	2.52	2.81	84.89	66.37	-2.12	-0.01	-0.05	0	-0.29	-0.01
2/11/2024 17:00	4.3	3.86	3.9	2.52	2.82	84.89	66.41	-2.11	-0.01	-0.04	0	-0.3	-0.01
2/11/2024 16:00	4.3	3.89	3.9	2.52	2.82	84.88	66.43	-2.08	0	-0.01	0	-0.3	-0.01
2/11/2024 15:00	4.3	3.89	3.92	2.52	2.82	84.9	66.42	-2.08	0	-0.03	0	-0.3	-0.01
2/11/2024 14:00	4.31	3.9	3.94	2.55	2.84	84.89	66.41	-2.1	0	-0.05	0	-0.29	-0.01
2/11/2024 13:00	4.32	3.93	3.94	2.57	2.86	84.9	66.4	-2.11	-0.01	-0.01	0	-0.3	-0.01
2/11/2024 12:00	4.35	3.93	3.98	2.57	2.87	84.88	66.41	-2.1	-0.01	-0.05	0	-0.3	-0.01
2/11/2024 11:00	4.38	3.96	4	2.61	2.91	84.9	66.42	-2.1	-0.01	-0.04	0	-0.3	-0.01
2/11/2024 10:00	4.41	3.98	4.03	2.64	2.93	84.89	66.47	-2.11	0	-0.05	0	-0.3	-0.01
2/11/2024 9:00	4.47	4.03	4.08	2.69	2.99	84.89	66.54	-2.1	-0.01	-0.05	0	-0.3	-0.01

Data Table 4_hourly

Timestamps	ro pit 4103.output _value	ro pit 4104.output _value	ro pit 4105.output _value	ro pit 4106.output _value	ro pit 4107.output _value	ro pit 4200.output _value	ro tit 4100.output _value	st1_dp.outp ut_value	st1_flx.outp ut_value	st2_op_dp.o utput_value	st2_flx.outp ut_value	st3_dp.outp ut_value	st3_flx.outp ut_value
2/11/2024 8:00	4.53	4.08	4.14	2.75	3.06	84.86	66.66	-2.1	-0.01	-0.06	0	-0.31	-0.01
2/11/2024 7:00	4.59	4.14	4.19	2.8	3.13	84.89	66.84	-2.09	-0.01	-0.05	0	-0.33	-0.01
2/11/2024 6:00	4.71	4.24	4.31	2.9	3.23	84.85	67.06	-2.09	-0.01	-0.05	0	-0.33	0
2/11/2024 5:00	4.89	4.41	4.47	3.09	3.43	84.88	67.29	-2.08	-0.01	-0.07	0	-0.33	-0.01
2/11/2024 4:00	4.94	4.46	4.52	3.14	3.5	84.87	67.51	-2.08	-0.01	-0.06	0	-0.36	-0.01
2/11/2024 3:00	4.96	4.47	4.52	3.16	3.49	84.88	67.75	-2.08	-0.01	-0.06	0	-0.32	-0.01
2/11/2024 2:00	4.98	4.47	4.56	3.19	3.53	84.88	67.99	-2.07	-0.01	-0.09	0	-0.34	-0.01
2/11/2024 1:00	4.99	4.5	4.56	3.19	3.53	84.87	68.25	-2.08	-0.01	-0.05	0	-0.34	-0.01
2/11/2024 0:00	5	4.5	4.56	3.19	3.53	84.91	68.51	-2.09	-0.01	-0.06	0	-0.34	-0.01
2/10/2024 23:00	5.02	4.51	4.6	3.24	3.55	84.87	68.78	-2.07	-0.01	-0.08	0	-0.32	-0.01
2/10/2024 22:00	5.03	4.54	4.6	3.24	3.58	84.89	69.05	-2.09	-0.01	-0.05	0	-0.34	-0.01

Data Table 5_hourly

Timestamps	fit_821.outp uts.value	ait_821.outp uts.value	filters.pf flow totals.1_thru	filter turb.pf1atur b.pv	filter turb.pf1btur b.pv	filter turb.pf2atur b.pv	filter turb.pf2btur b.pv	filter turb.pf3atur b.pv	filters.a_pf4 a.filterturbid itypv	filters.a_pf4 b.filterturbid itypv	filter turb.pf3btur b.pv	filter turb.pf6btur b.pv	filters.pf flow totals.5_6_p	pressure filters.a_pf5 a.flowpv	pressure filters.a_pf5 b.flowpv	pressure filters.a_pf6 a.flowpv
2/19/2024 20:00	-0.35	NoData	NoData	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	NoData	NoData	NoData	NoData
2/19/2024 19:00	-0.35	NoData	1602.72	0.1	NoData	NoData	NoData	0	NoData	NoData	0.13	NoData	NoData	NoData	NoData	NoData
2/19/2024 18:00	-0.35	NoData	2739.24	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.18	NoData	NoData	NoData	NoData	NoData
2/19/2024 17:00	-0.35	NoData	4990.76	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.19	NoData	NoData	NoData	NoData	NoData
2/19/2024 16:00	-0.35	NoData	2620.46	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	NoData	NoData	NoData	NoData
2/19/2024 15:00	-0.35	NoData	3083.53	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.19	NoData	NoData	NoData	NoData	NoData
2/19/2024 14:00	-0.35	NoData	2997.59	0.09	0.01	NoData	NoData	NoData	NoData	NoData	0.19	NoData	NoData	NoData	NoData	NoData
2/19/2024 13:00	-0.24	NoData	3968.98	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	NoData	NoData	NoData	NoData
2/19/2024 12:00	1010.84	NoData	4850.1	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1000.41	532.15	NoData	476.52
2/19/2024 11:00	1006.83	NoData	3891.46	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.24	NoData	992.44	528.7	NoData	470.7
2/19/2024 10:00	1009.56	NoData	2418.82	0.15	NoData	NoData	NoData	NoData	NoData	NoData	0.2	NoData	990.07	527.11	NoData	470.73
2/19/2024 9:00	1007.58	NoData	1528.74	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	992.33	529.95	NoData	470.23
2/19/2024 8:00	1009.59	NoData	1436.63	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	998.68	531.3	0.37	470.37
2/19/2024 7:00	1013.51	NoData	1236.99	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	992.3	530	NoData	471.2
2/19/2024 6:00	1025.11	NoData	1231.99	0.08	NoData	NoData	0.01	NoData	NoData	NoData	0.11	NoData	1015.12	532.58	NoData	485.79
2/19/2024 5:00	1006.75	NoData	1235.04	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	991.89	529.54	NoData	467.84
2/19/2024 4:00	1019.59	NoData	1231.39	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	1014.29	538.1	NoData	478.73
2/19/2024 3:00	1014	NoData	1204.47	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	996.38	529.38	NoData	475.75
2/19/2024 2:00	1023.17	NoData	1224.9	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	1012.52	533.04	NoData	484.18
2/19/2024 1:00	1015.01	NoData	1226.2	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	1001.78	532.34	NoData	474.25
2/19/2024 0:00	996.69	NoData	1225.78	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	985.47	522.07	NoData	469.24
2/18/2024 23:00	1018.91	NoData	1223.82	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	1006.27	533.3	NoData	477.63
2/18/2024 22:00	1015.09	NoData	1234.96	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	999.3	528.84	NoData	475.55
2/18/2024 21:00	1022.08	NoData	1241.56	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	1008.39	529.75	NoData	483.51
2/18/2024 20:00	1020.3	NoData	1239.01	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	997.85	525.67	NoData	481.86
2/18/2024 19:00	1018.08	NoData	1256.4	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	995.6	524.87	NoData	476.38
2/18/2024 18:00	1027.39	0.09	1258.75	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1016.36	532.72	NoData	488.32
2/18/2024 17:00	1019.81	NoData	1284.09	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1006.22	529.26	NoData	485.27
2/18/2024 16:00	1019.14	0.1	1311.37	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.14	NoData	998.13	525.43	NoData	477.92
2/18/2024 15:00	1023.42	NoData	1284.25	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	1008.88	533.02	NoData	480.97
2/18/2024 14:00	1024.91	NoData	1326.56	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.17	NoData	1006.32	527.93	NoData	485.51
2/18/2024 13:00	1024.57	NoData	1325.77	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.17	NoData	1012.76	533.57	NoData	484.65
2/18/2024 12:00	1028.88	NoData	1363.41	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	1014.46	525.97	NoData	494.61
2/18/2024 11:00	1006.27	0.1	1327.44	0.08	NoData	NoData	NoData	0.01	NoData	NoData	0.14	NoData	970.92	521.12	NoData	463.78
2/18/2024 10:00	1017.03	NoData	1276.96	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	992.64	529.45	NoData	472.69
2/18/2024 9:00	1016.64	NoData	1255.54	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	998.76	530.74	NoData	474.33
2/18/2024 8:00	1010.38	NoData	1268.4	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	986.51	528.66	NoData	467.24
2/18/2024 7:00	1012.37	NoData	1069.62	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	988.07	526.1	NoData	469.26
2/18/2024 6:00	1014.39	NoData	388.96	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	997.51	528.57	NoData	476.02
2/18/2024 5:00	1014.35	NoData	1004.34	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	999.78	530.36	NoData	473.56
2/18/2024 4:00	1007.24	NoData	1153.55	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	979.13	524.62	NoData	464.01
2/18/2024 3:00	1016.69	NoData	1151.03	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.08	NoData	997.31	532.41	NoData	475.6
2/18/2024 2:00	1006.55	NoData	1146.55	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.08	NoData	974.27	523.37	NoData	462.8
2/18/2024 1:00	1023.82	NoData	1147.96	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.08	NoData	1015.82	536.47	NoData	483.11
2/18/2024 0:00	1012.79	NoData	1170.64	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.08	NoData	977.28	522.06	NoData	466.65
2/17/2024 23:00	1019.17	NoData	1149.68	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.08	NoData	990.57	529.42	NoData	472.93
2/17/2024 22:00	1007.87	NoData	1169.68	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	977.34	521.14	NoData	464.6
2/17/2024 21:00	1015.4	NoData	1162.25	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	993.66	526.94	NoData	476.51
2/17/2024 20:00	1019.24	NoData	1155.46	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	998.53	530.26	NoData	474.99
2/17/2024 19:00	1008.77	NoData	1141.56	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	978.6	523.57	0.31	462.78
2/17/2024 18:00	1026.05	0.09	1084.3	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	1015.71	536.5	NoData	484.62

Data Table 5_hourly

Timestamps	fit_821.outp uts.value	ait_821.outp uts.value	filters.pf flow totals.1_thru	filter turb.pf1atur b.pv	filter turb.pf1btur b.pv	filter turb.pf2atur b.pv	filter turb.pf2btur b.pv	filter turb.pf3atur b.pv	filters.a_pf4 a.filterturbid itypv	filters.a_pf4 b.filterturbid itypv	filter turb.pf3btur b.pv	filter turb.pf6btur b.pv	filters.pf flow totals.5_6_p	pressure filters.a_pf5 a.flowpv	pressure filters.a_pf5 b.flowpv	pressure filters.a_pf6 a.flowpv
2/17/2024 17:00	1008.81	NoData	2247.18	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.14	NoData	981.24	521.98	NoData	469.77
2/17/2024 16:00	1015.7	0.1	2499.33	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	991.79	528.89	NoData	472.33
2/17/2024 15:00	1011.94	NoData	3295.59	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.2	NoData	987.57	527.77	NoData	466.63
2/17/2024 14:00	1014.05	0.1	3694.21	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.17	NoData	989.12	528.79	NoData	470.73
2/17/2024 13:00	1021.01	NoData	3276.68	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.17	NoData	995.67	529.22	NoData	475.13
2/17/2024 12:00	1022.31	NoData	3633.52	0.1	NoData	NoData	NoData	0.01	NoData	NoData	0.21	NoData	994.2	528.45	NoData	477.26
2/17/2024 11:00	1015.01	NoData	3081.72	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.19	NoData	999.74	529.57	NoData	474.43
2/17/2024 10:00	1023.1	NoData	1874.75	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.17	NoData	1001.17	529.79	NoData	480.29
2/17/2024 9:00	1018.43	NoData	1594.98	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1002.81	532.39	NoData	476.25
2/17/2024 8:00	1018.82	NoData	511.47	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	994.79	528.58	NoData	475.57
2/17/2024 7:00	1016.32	NoData	1128.22	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	992.72	528.82	NoData	475.24
2/17/2024 6:00	1018.28	NoData	1118.14	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	998.09	529.27	NoData	476.84
2/17/2024 5:00	1027.7	NoData	1158.87	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	1005.68	528.02	NoData	486.51
2/17/2024 4:00	1016.46	NoData	1121.84	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	998.97	530.48	NoData	477.19
2/17/2024 3:00	1018.6	NoData	1129.58	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	999.61	528.45	NoData	478.55
2/17/2024 2:00	1024.17	NoData	1135.22	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	1004.56	532.56	NoData	480.54
2/17/2024 1:00	1021.25	NoData	1127.12	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	1002.91	531.52	NoData	480.15
2/17/2024 0:00	1026.91	NoData	1167.15	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	994.94	527.5	-0.34	481.36
2/16/2024 23:00	1027.2	NoData	1124.34	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	1005.4	529.74	NoData	483.39
2/16/2024 22:00	1026	NoData	1118.96	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	1012.71	533.66	NoData	487.06
2/16/2024 21:00	1034.72	NoData	1112.76	0.07	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	1029.52	535.92	NoData	495.49
2/16/2024 20:00	1038.41	NoData	1038.9	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.14	NoData	1032.07	537.36	NoData	497.53
2/16/2024 19:00	1027.01	NoData	2356.83	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.22	NoData	1020.85	532.42	NoData	492.87
2/16/2024 18:00	1036.98	NoData	2877.24	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1033.62	534.81	NoData	500.59
2/16/2024 17:00	1028.96	0.1	2369.31	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.18	NoData	1024.18	533.53	NoData	494.43
2/16/2024 16:00	1033.24	0.1	3512.25	0.09	NoData	NoData	NoData	0.02	NoData	NoData	0.22	NoData	1025.7	532.47	NoData	496.64
2/16/2024 15:00	1042.93	NoData	3431.17	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.26	NoData	1039.75	529.87	-0.41	510.96
2/16/2024 14:00	1056.22	NoData	3658.3	0.1	NoData	NoData	NoData	0.02	NoData	NoData	0.27	NoData	1052.47	528.75	NoData	523.75
2/16/2024 13:00	1056.45	0.11	3130.7	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.29	NoData	1052.34	528.47	NoData	523.91
2/16/2024 12:00	1018.64	NoData	3587.96	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.33	NoData	1014.48	521.8	NoData	495.33
2/16/2024 11:00	978.58	0.11	3876.17	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.28	NoData	980.44	522.13	NoData	469.1
2/16/2024 10:00	397.34	0.1	4434.86	0.1	NoData	NoData	NoData	0.03	NoData	NoData	0.26	NoData	218.21	130.88	NoData	100.69
2/16/2024 9:00	808.83	NoData	3869.86	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.27	NoData	1025.53	513.66	NoData	519.25
2/16/2024 8:00	1046.57	NoData	3221.04	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1044.47	525.03	NoData	519.47
2/16/2024 7:00	1046.09	NoData	1745.84	0.08	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1043.05	524.27	NoData	518.81
2/16/2024 6:00	1043.69	NoData	2000.64	0.1	NoData	NoData	NoData	0.01	NoData	NoData	0.18	NoData	1041.47	533.56	NoData	507.59
2/16/2024 5:00	1041.85	NoData	2934.82	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.29	NoData	1039.67	535.85	NoData	503.8
2/16/2024 4:00	1042.06	NoData	3384.84	0.11	NoData	NoData	NoData	0.02	NoData	NoData	0.29	NoData	1040.32	535.99	NoData	504.28
2/16/2024 3:00	1042.36	NoData	3384.98	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.29	NoData	1040.05	535.76	NoData	504.19
2/16/2024 2:00	1043.45	NoData	3388.06	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.28	NoData	1041.41	536.16	NoData	505.16
2/16/2024 1:00	1044.58	NoData	3411.79	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.29	NoData	1041.78	536.53	NoData	505.27
2/16/2024 0:00	1045.23	NoData	3382.68	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.29	NoData	1042.59	536.21	NoData	506.45
2/15/2024 23:00	1045.44	NoData	3383.13	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.28	NoData	1043.35	536.33	NoData	507.09
2/15/2024 22:00	1046.83	NoData	3384.44	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.26	NoData	1045.04	536.96	NoData	508.16
2/15/2024 21:00	1047.88	NoData	3388.93	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.24	NoData	1045.64	536.83	NoData	508.75
2/15/2024 20:00	1049.09	NoData	3415.14	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1047	537.46	NoData	509.51
2/15/2024 19:00	1050.55	NoData	3389.34	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.21	NoData	1048.31	537.74	NoData	510.58
2/15/2024 18:00	1052.26	NoData	3359.23	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.22	NoData	1049.69	537.84	NoData	511.97
2/15/2024 17:00	1012.47	0.09	2001.5	0.1	NoData	NoData	NoData	0.02	NoData	NoData	0.23	NoData	965.86	509.93	NoData	465.58
2/15/2024 16:00	806.46	0.09	1996.12	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.17	NoData	1028.8	526.8	NoData	505.09
2/15/2024 15:00	1044.68	NoData	3170.98	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.3	NoData	1041.05	531.97	NoData	509.07

Data Table 5_hourly

Timestamps	fit_821.outp uts.value	ait_821.outp uts.value	filters.pf flow totals.1_thru	filter turb.pf1atur b.pv	filter turb.pf1btur b.pv	filter turb.pf2atur b.pv	filter turb.pf2btur b.pv	filter turb.pf3atur b.pv	filters.a_pf4 a.filterturbid itypv	filters.a_pf4 b.filterturbid itypv	filter turb.pf3btur b.pv	filter turb.pf6btur b.pv	filters.pf flow totals.5_6_p	pressure filters.a_pf5 a.flowpv	pressure filters.a_pf5 b.flowpv	pressure filters.a_pf6 a.flowpv
2/15/2024 14:00	1045.34	0.1	3430.19	0.14	NoData	NoData	NoData	0.03	NoData	NoData	0.39	NoData	1042.06	531.69	NoData	510.43
2/15/2024 13:00	1046.29	NoData	2819	0.15	NoData	NoData	0.01	0.02	NoData	NoData	0.38	NoData	1042.69	532.13	NoData	510.49
2/15/2024 12:00	1047.84	0.1	4893.14	0.15	NoData	NoData	NoData	NoData	NoData	NoData	0.42	NoData	1044.17	532.62	NoData	511.6
2/15/2024 11:00	1048.95	0.1	5141.1	0.13	NoData	NoData	NoData	0.03	NoData	NoData	0.34	NoData	1045.06	532.6	NoData	512.45
2/15/2024 10:00	1049.93	NoData	5200.98	0.13	NoData	NoData	NoData	0.02	NoData	NoData	0.32	NoData	1046.32	533.09	NoData	513.29
2/15/2024 9:00	1049.85	NoData	4000.37	0.1	NoData	NoData	0.02	0.03	NoData	NoData	0.2	NoData	1047.37	533.16	NoData	514.2
2/15/2024 8:00	1050.78	NoData	2040.81	0.12	NoData	NoData	NoData	0.01	NoData	NoData	0.31	NoData	1048.36	533.58	NoData	514.7
2/15/2024 7:00	1053.19	NoData	3671.46	0.1	NoData	NoData	NoData	0.02	NoData	NoData	0.28	NoData	1051.16	534.26	NoData	516.86
2/15/2024 6:00	983.8	0.09	4274.38	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.25	NoData	915.14	490.75	0.19	439.68
2/15/2024 5:00	773.92	NoData	3593.23	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1022.23	533.41	NoData	494.76
2/15/2024 4:00	1042.88	NoData	3392.53	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1042.08	539.66	NoData	502.49
2/15/2024 3:00	1043.44	NoData	3387.55	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.22	NoData	1042.07	539.87	NoData	502.22
2/15/2024 2:00	1044.68	0.08	3430.46	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.2	NoData	1043.47	540.18	NoData	503.18
2/15/2024 1:00	1045.79	NoData	3591.13	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1044.12	540.41	NoData	503.63
2/15/2024 0:00	1045.62	NoData	2815.04	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.25	NoData	1043.81	543.22	NoData	500.55
2/14/2024 23:00	1012.94	NoData	3220.87	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.27	NoData	1011.42	540.19	NoData	471.15
2/14/2024 22:00	1013.72	NoData	3490.9	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.25	NoData	1011.12	539.69	NoData	471.44
2/14/2024 21:00	1013.91	NoData	3495.11	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.24	NoData	1012.37	540.87	NoData	471.5
2/14/2024 20:00	1011.76	NoData	3771.61	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1009.7	539.59	NoData	469.2
2/14/2024 19:00	816.46	NoData	3958.89	0.09	NoData	NoData	0.01	NoData	NoData	NoData	0.23	NoData	895.26	471.52	NoData	436.79
2/14/2024 18:00	1044.96	NoData	1858.86	0.09	NoData	NoData	NoData	0.02	NoData	NoData	0.18	NoData	1043.34	536.84	NoData	506.6
2/14/2024 17:00	1046.05	0.09	2253.49	0.09	NoData	NoData	NoData	0.02	NoData	NoData	0.2	NoData	1043.86	536.55	NoData	507.27
2/14/2024 16:00	1046.92	NoData	970.67	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.26	NoData	1043.55	536.1	NoData	507.44
2/14/2024 15:00	1048.37	NoData	1631.68	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.15	NoData	1044.88	536.71	NoData	508.11
2/14/2024 14:00	1050.25	0.1	3340.97	0.11	NoData	NoData	NoData	0.02	NoData	NoData	0.28	NoData	1046.16	536.88	NoData	509.19
2/14/2024 13:00	1051.71	0.11	1604.91	0.1	NoData	NoData	NoData	0.01	NoData	NoData	0.18	NoData	1047.67	537.46	NoData	510.23
2/14/2024 12:00	1053.28	0.1	2617.66	0.96	NoData	NoData	NoData	0.02	NoData	NoData	0.23	NoData	1049.24	537.72	NoData	511.51
2/14/2024 11:00	1053.69	NoData	2135.86	1.51	NoData	NoData	0.02	0.01	NoData	NoData	0.22	NoData	1049.94	537.91	NoData	512.02
2/14/2024 10:00	1055.02	NoData	2624.92	1.2	NoData	NoData	NoData	0.02	NoData	NoData	0.24	NoData	1051.53	538.35	NoData	513.2
2/14/2024 9:00	1056.08	NoData	1580.06	0.43	NoData	NoData	NoData	0.02	NoData	NoData	0.31	NoData	1052.84	538.41	NoData	514.39
2/14/2024 8:00	1058.09	NoData	2467.53	1.04	NoData	NoData	NoData	0.02	NoData	NoData	0.3	NoData	1055	539.03	NoData	515.96
2/14/2024 7:00	1021.46	NoData	4361.82	1.03	NoData	NoData	NoData	0.02	NoData	NoData	0.32	NoData	968.7	509.11	NoData	467.29
2/14/2024 6:00	686.66	NoData	4210.75	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.25	NoData	1002.27	523.1	NoData	486.95
2/14/2024 5:00	1045.49	NoData	3391.36	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.24	NoData	1043.35	541.22	NoData	502.19
2/14/2024 4:00	1046.1	NoData	3411.08	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.24	NoData	1043.94	541.34	NoData	502.48
2/14/2024 3:00	1046.47	NoData	3403.25	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1044.58	541.87	NoData	502.62
2/14/2024 2:00	1046.93	NoData	3408.88	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1045.43	541.79	NoData	503.57
2/14/2024 1:00	1047.41	NoData	3398.67	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.24	NoData	1045.68	541.93	-0.31	503.85
2/14/2024 0:00	1042.06	NoData	3435.55	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.24	NoData	1041.34	541.68	NoData	500.55
2/13/2024 23:00	1022.22	NoData	3431.99	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1021.31	540.76	NoData	480.53
2/13/2024 22:00	1022.63	NoData	3422.97	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1021.34	541.84	NoData	479.47
2/13/2024 21:00	1023.53	NoData	3436.2	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.22	NoData	1021.66	541.99	NoData	479.67
2/13/2024 20:00	1023.84	NoData	3435.34	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.22	NoData	1022.1	542.28	NoData	479.89
2/13/2024 19:00	1024.39	NoData	3435.55	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.21	NoData	1022.55	542.11	NoData	480.45
2/13/2024 18:00	1024.48	0.09	3436.58	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.21	NoData	1022.09	542.2	NoData	479.88
2/13/2024 17:00	1025.34	0.09	3429.1	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.25	NoData	1022.49	542.16	NoData	480.33
2/13/2024 16:00	1027.41	NoData	3583.71	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	1024.19	543.01	-0.35	481.19
2/13/2024 15:00	891.68	NoData	4160.35	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.2	NoData	927.27	500.36	NoData	442.21
2/13/2024 14:00	1049.72	0.1	3388.08	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.18	NoData	1046.14	540.28	NoData	505.77
2/13/2024 13:00	1050.65	NoData	3644.28	0.13	NoData	NoData	NoData	NoData	NoData	NoData	0.17	NoData	1046.85	540.52	NoData	506.38
2/13/2024 12:00	1051.51	0.1	3418.7	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.18	NoData	1047.26	541.32	NoData	506.05

Data Table 5_hourly

Timestamps	fit_821.outp uts.value	ait_821.outp uts.value	filters.pf flow totals.1_thru	filter turb.pf1atur b.pv	filter turb.pf1btur b.pv	filter turb.pf2atur b.pv	filter turb.pf2btur b.pv	filter turb.pf3atur b.pv	filters.a_pf4 a.filterturbid itypv	filters.a_pf4 b.filterturbid itypv	filter turb.pf3btur b.pv	filter turb.pf6btur b.pv	filters.pf flow totals.5_6_p	pressure filters.a_pf5 a.flowpv	pressure filters.a_pf5 b.flowpv	pressure filters.a_pf6 a.flowpv
2/13/2024 11:00	1052.13	0.1	3396.45	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.2	NoData	1047.45	542.08	NoData	505.36
2/13/2024 10:00	1051.59	0.09	3671.68	0.12	NoData	NoData	0.02	NoData	NoData	NoData	0.15	NoData	1048.17	542.13	NoData	506.03
2/13/2024 9:00	1050.73	NoData	3576.87	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.18	NoData	1048.36	542.42	NoData	505.88
2/13/2024 8:00	1051.28	NoData	1640.42	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.15	NoData	1048.51	542.19	NoData	506.28
2/13/2024 7:00	985.38	0.08	1824.76	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.17	NoData	987.99	521.48	NoData	470.71
2/13/2024 6:00	1041.26	0.14	3409.93	0.12	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	1040.27	516.3	NoData	526.72
2/13/2024 5:00	1047.59	NoData	3409.65	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.15	NoData	1046.57	516.9	-0.43	529.67
2/13/2024 4:00	1048.03	NoData	3408.58	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.15	NoData	1045.99	516.72	NoData	529.31
2/13/2024 3:00	1048.52	NoData	3408.94	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.14	NoData	1047.09	517.22	NoData	529.88
2/13/2024 2:00	1048.81	NoData	3410.52	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1047.81	516.86	NoData	530.8
2/13/2024 1:00	1049.06	NoData	3410	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1047.67	516.92	NoData	530.77
2/13/2024 0:00	1049.47	NoData	3378.4	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	1049.22	517	0.18	532.23
2/12/2024 23:00	1049.99	NoData	3379.4	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	1048.51	516.36	NoData	532.21
2/12/2024 22:00	1050.45	0.08	3380.75	0.11	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1048.95	516.64	NoData	532.27
2/12/2024 21:00	1051.19	NoData	3247.53	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.08	NoData	1049.37	516.51	NoData	532.71
2/12/2024 20:00	1051.83	NoData	791.74	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	1050.52	516.97	NoData	533.55
2/12/2024 19:00	1052.7	NoData	3496.94	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1050.89	516.64	NoData	534.26
2/12/2024 18:00	1053.29	NoData	3352	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	1051.2	516.58	NoData	534.6
2/12/2024 17:00	1053.99	0.1	3554.36	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.15	NoData	1051.64	516.58	NoData	535
2/12/2024 16:00	1055.06	NoData	4324.23	0.09	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	1051.82	516.15	NoData	535.75
2/12/2024 15:00	1056.42	0.1	3037.53	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	1052.39	516.02	NoData	536.35
2/12/2024 14:00	1057.66	NoData	3550.86	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	1052.96	516.04	NoData	536.93
2/12/2024 13:00	1059.23	NoData	3575.59	0.1	NoData	NoData	0.02	NoData	NoData	NoData	0.15	NoData	1054.2	516.1	NoData	538.06
2/12/2024 12:00	1061.21	0.11	3571.18	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.15	NoData	1055.24	516.61	NoData	538.68
2/12/2024 11:00	1063.8	0.11	3358.59	0.1	NoData	NoData	NoData	NoData	NoData	NoData	0.15	NoData	1056.66	523.77	NoData	532.8
2/12/2024 10:00	1066.86	0.09	2789.31	0.1	NoData	NoData	0.01	NoData	NoData	NoData	0.19	NoData	1062.38	535.73	NoData	526.73
2/12/2024 9:00	947.61	NoData	3113.49	1.03	NoData	NoData	NoData	NoData	NoData	NoData	0.21	NoData	815.28	425.62	NoData	412.74
2/12/2024 8:00	-0.47	NoData	4402.8	1.93	0.04	NoData	NoData	NoData	NoData	NoData	0.14	NoData	0.5	NoData	NoData	0.58
2/12/2024 7:00	-0.52	NoData	4512.57	0.82	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	NoData	NoData	NoData	NoData
2/12/2024 6:00	-0.52	NoData	0.5	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 5:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 4:00	-0.52	NoData	0.5	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.5	NoData	NoData	-0.45
2/12/2024 3:00	-0.52	NoData	0.5	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.23	NoData	NoData
2/12/2024 2:00	-0.52	NoData	NoData	0.55	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.5	-0.39	NoData	-0.6
2/12/2024 1:00	-0.52	NoData	-0.5	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 0:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 23:00	-0.52	0.08	-0.5	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 22:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 21:00	-0.52	NoData	-0.5	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	NoData	NoData	NoData	NoData
2/11/2024 20:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	NoData	NoData	NoData	NoData
2/11/2024 19:00	-0.52	NoData	NoData	0.57	NoData	NoData	NoData	NoData	NoData	NoData	0.12	NoData	NoData	NoData	NoData	NoData
2/11/2024 18:00	-0.35	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.13	NoData	NoData	NoData	NoData	NoData
2/11/2024 17:00	-0.35	0.09	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.14	NoData	NoData	NoData	NoData	NoData
2/11/2024 16:00	-0.23	NoData	0.5	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	NoData	NoData	NoData	NoData
2/11/2024 15:00	0.12	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.18	NoData	NoData	NoData	NoData	NoData
2/11/2024 14:00	0.1	0.1	0.5	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.18	NoData	NoData	NoData	NoData	NoData
2/11/2024 13:00	NoData	NoData	-0.5	0.57	NoData	NoData	NoData	NoData	NoData	NoData	0.18	NoData	NoData	NoData	NoData	NoData
2/11/2024 12:00	0.17	0.11	NoData	NoData	NoData	NoData	0.02	NoData	NoData	NoData	0.17	NoData	NoData	NoData	NoData	NoData
2/11/2024 11:00	0.18	NoData	NoData	0.57	NoData	NoData	NoData	NoData	NoData	NoData	0.16	NoData	NoData	NoData	NoData	NoData
2/11/2024 10:00	0.12	0.09	NoData	0.58	NoData	NoData	NoData	NoData	NoData	NoData	0.11	NoData	NoData	NoData	NoData	NoData
2/11/2024 9:00	-0.42	NoData	0.5	NoData	NoData	NoData	0.02	NoData	NoData	NoData	0.1	NoData	NoData	NoData	NoData	NoData

Data Table 5_hourly

Timestamps	fit_821.outp uts.value	ait_821.outp uts.value	filters.pf flow totals.1_thru	filter turb.pf1atur b.pv	filter turb.pf1btur b.pv	filter turb.pf2atur b.pv	filter turb.pf2btur b.pv	filter turb.pf3atur b.pv	filters.a_pf4 a.filterturbid itypv	filters.a_pf4 b.filterturbid itypv	filter turb.pf3btur b.pv	filter turb.pf6btur b.pv	filters.pf flow totals.5_6_p	pressure filters.a_pf5 a.flowpv	pressure filters.a_pf5 b.flowpv	pressure filters.a_pf6 a.flowpv
2/11/2024 8:00	-0.52	NoData	NoData	0.6	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.5	NoData	NoData	-0.49
2/11/2024 7:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	NoData	NoData	NoData	NoData
2/11/2024 6:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	NoData	NoData	NoData	NoData
2/11/2024 5:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	NoData	NoData	NoData	NoData
2/11/2024 4:00	-0.52	NoData	NoData	0.62	NoData	NoData	NoData	NoData	NoData	NoData	0.1	NoData	NoData	NoData	NoData	NoData
2/11/2024 3:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	NoData	NoData	NoData	NoData
2/11/2024 2:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	NoData	NoData	NoData	-0.04
2/11/2024 1:00	-0.52	0.08	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	NoData	NoData	NoData	NoData
2/11/2024 0:00	-0.52	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	NoData	NoData	NoData	NoData
2/10/2024 23:00	-0.52	NoData	NoData	0.64	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	NoData	NoData	NoData	NoData
2/10/2024 22:00	-0.44	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.09	NoData	NoData	NoData	NoData	NoData

Data Table 5_hourly

Timestamps	pressure filters.a_pf6 b.flwppv	_bw_supply_ fit.valuescre en	filter turb.pf5atur b.pv	filter turb.pf5btur b.pv	filter turb.pf6atur b.pv	a_rof_ait_10 13b.outputs .value	gac_fit_1020 .outputs.val ue	gac_fit_2020 .outputs.val ue	gac_fit_3020 .outputs.val ue	gac_fit_4020 .outputs.val ue	gac_pdit_11 03.outputs.v alue	gac_pdit_12 03.outputs.v alue	gac_pdit_21 03.outputs.v alue	gac_pdit_22 03.outputs.v alue	gac_pdit_31 03.outputs.v alue	gac_pdit_32 03.outputs.v alue
2/19/2024 20:00	0.03	NoData	NoData	NoData	NoData	0.46	-0.14	NoData	NoData	-0.11	NoData	NoData	-0.11	-0.11	NoData	NoData
2/19/2024 19:00	0.03	NoData	NoData	NoData	NoData	NoData	NoData	-0.07	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/19/2024 18:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	-0.11	NoData
2/19/2024 17:00	NoData	NoData	NoData	NoData	NoData	0.58	NoData	NoData	NoData	NoData	0.08	NoData	NoData	NoData	NoData	NoData
2/19/2024 16:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.14	NoData	NoData	-0.11	NoData	NoData	NoData	NoData	NoData	NoData
2/19/2024 15:00	NoData	NoData	NoData	NoData	NoData	0.73	NoData	NoData	NoData	NoData	NoData	0.7	NoData	NoData	NoData	3.45
2/19/2024 14:00	NoData	NoData	NoData	NoData	NoData	0.97	NoData	NoData	NoData	NoData	NoData	0.69	NoData	NoData	NoData	3.5
2/19/2024 13:00	NoData	NoData	NoData	NoData	NoData	1.56	NoData	NoData	NoData	-0.09	NoData	0.91	NoData	NoData	NoData	3.57
2/19/2024 12:00	NoData	NoData	NoData	NoData	NoData	1.79	506.91	NoData	503.01	-0.09	0.06	8.91	NoData	NoData	NoData	10.28
2/19/2024 11:00	NoData	NoData	NoData	NoData	NoData	1.59	506.94	NoData	505.75	-0.11	0.06	8.83	NoData	NoData	NoData	10.26
2/19/2024 10:00	NoData	0.01	NoData	NoData	NoData	1.73	506.66	NoData	500.1	NoData	0.06	8.82	NoData	NoData	NoData	10.19
2/19/2024 9:00	0.02	NoData	NoData	NoData	NoData	1.76	508.27	NoData	503.61	NoData	0.06	8.78	NoData	NoData	NoData	10.2
2/19/2024 8:00	NoData	0.01	NoData	NoData	NoData	1.65	508.66	-0.05	503.95	NoData	0.06	8.8	NoData	NoData	NoData	10.22
2/19/2024 7:00	NoData	NoData	NoData	NoData	NoData	1.39	508.96	NoData	503.05	NoData	0.06	8.79	NoData	NoData	NoData	10.21
2/19/2024 6:00	NoData	NoData	NoData	NoData	NoData	1.63	517.38	NoData	511.36	NoData	0.06	8.83	NoData	NoData	NoData	10.32
2/19/2024 5:00	NoData	NoData	NoData	NoData	NoData	1.8	506.83	NoData	498.5	-0.1	0.06	8.54	NoData	NoData	NoData	10.18
2/19/2024 4:00	NoData	NoData	NoData	NoData	NoData	1.75	512.42	NoData	501.7	NoData	0.06	8.36	NoData	NoData	NoData	10.19
2/19/2024 3:00	NoData	NoData	NoData	NoData	NoData	1.77	514.47	NoData	510.27	NoData	0.06	8.21	NoData	NoData	NoData	10.31
2/19/2024 2:00	NoData	NoData	NoData	NoData	NoData	1.81	516.41	NoData	506.66	NoData	0.06	8.04	NoData	NoData	NoData	10.24
2/19/2024 1:00	NoData	NoData	NoData	NoData	NoData	1.79	512.74	-0.06	501.11	NoData	0.06	7.84	-0.11	-0.11	-0.11	10.18
2/19/2024 0:00	NoData	NoData	NoData	NoData	NoData	1.87	507.19	-0.06	496.67	NoData	0.07	7.61	NoData	NoData	-0.11	10.07
2/18/2024 23:00	NoData	NoData	NoData	NoData	NoData	1.85	514.54	NoData	506.35	NoData	0.07	7.49	NoData	NoData	NoData	10.19
2/18/2024 22:00	NoData	NoData	NoData	NoData	NoData	1.84	514.24	NoData	500.89	NoData	0.09	7.3	NoData	NoData	NoData	10.17
2/18/2024 21:00	NoData	NoData	NoData	NoData	NoData	1.88	515.66	NoData	509.1	-0.1	0.09	7.1	NoData	NoData	NoData	10.11
2/18/2024 20:00	0.04	0.01	NoData	NoData	NoData	1.92	516.08	NoData	500.29	NoData	0.1	6.91	NoData	NoData	-0.11	10.06
2/18/2024 19:00	NoData	NoData	NoData	NoData	NoData	1.9	514.81	-0.06	490.18	NoData	0.1	6.66	NoData	NoData	NoData	9.89
2/18/2024 18:00	NoData	NoData	NoData	NoData	NoData	1.86	517.7	NoData	510.17	NoData	0.11	6.48	-0.11	-0.11	NoData	10.19
2/18/2024 17:00	NoData	NoData	NoData	NoData	NoData	2	515.59	NoData	508.55	NoData	0.13	6.3	NoData	NoData	NoData	10.16
2/18/2024 16:00	NoData	0.01	NoData	NoData	NoData	1.86	515.62	NoData	501.6	NoData	0.12	5.99	NoData	NoData	NoData	9.91
2/18/2024 15:00	0.04	0.01	NoData	NoData	NoData	2	516.4	-0.04	504.63	NoData	0.14	5.71	NoData	NoData	NoData	9.97
2/18/2024 14:00	NoData	0.01	NoData	NoData	NoData	1.94	517.49	-0.04	505.77	NoData	0.15	5.43	NoData	NoData	NoData	9.97
2/18/2024 13:00	NoData	0.01	NoData	NoData	NoData	1.99	516.86	NoData	510.01	NoData	0.16	5.17	NoData	NoData	-0.11	9.97
2/18/2024 12:00	NoData	0.01	NoData	NoData	NoData	2.01	499.04	NoData	466.39	450.6	0.16	4.83	-0.11	-0.11	NoData	9.54
2/18/2024 11:00	NoData	0.01	NoData	NoData	NoData	2.06	-0.1	NoData	495.79	510.6	NoData	NoData	NoData	NoData	NoData	10.01
2/18/2024 10:00	NoData	0.01	NoData	NoData	NoData	2.04	-0.11	NoData	500.44	511.79	NoData	NoData	NoData	NoData	-0.11	10.05
2/18/2024 9:00	NoData	0.01	NoData	NoData	NoData	2.03	NoData	NoData	502.01	515.91	0.16	NoData	NoData	NoData	NoData	10.04
2/18/2024 8:00	NoData	NoData	NoData	NoData	NoData	2.01	-0.13	NoData	489.69	504.94	NoData	NoData	NoData	NoData	-0.11	9.92
2/18/2024 7:00	NoData	NoData	NoData	NoData	NoData	1.8	NoData	NoData	503.19	512.35	NoData	NoData	NoData	NoData	NoData	10.08
2/18/2024 6:00	NoData	0.01	NoData	NoData	NoData	1.88	-0.13	-0.06	499.55	513.55	NoData	NoData	NoData	NoData	NoData	10.06
2/18/2024 5:00	NoData	NoData	NoData	NoData	NoData	2	-0.13	NoData	494.68	512.1	NoData	NoData	-0.11	-0.11	NoData	9.97
2/18/2024 4:00	0.03	NoData	NoData	NoData	NoData	1.91	-0.13	NoData	500.89	507.84	NoData	NoData	NoData	NoData	-0.11	10.04
2/18/2024 3:00	NoData	NoData	NoData	NoData	NoData	1.86	NoData	NoData	503.83	512.95	NoData	NoData	NoData	NoData	-0.11	10.11
2/18/2024 2:00	NoData	NoData	NoData	NoData	NoData	1.91	-0.12	NoData	489.1	507.76	NoData	NoData	-0.11	-0.11	NoData	9.86
2/18/2024 1:00	NoData	NoData	NoData	NoData	NoData	1.92	-0.13	NoData	511.66	517.81	NoData	NoData	NoData	NoData	-0.11	10.14
2/18/2024 0:00	NoData	NoData	NoData	NoData	NoData	1.95	NoData	NoData	494.84	508.1	NoData	NoData	-0.11	-0.11	NoData	9.9
2/17/2024 23:00	NoData	NoData	NoData	NoData	NoData	1.9	NoData	NoData	495.51	512.77	NoData	NoData	-0.11	-0.11	NoData	9.98
2/17/2024 22:00	NoData	NoData	NoData	NoData	NoData	1.91	NoData	NoData	493.91	507.05	NoData	NoData	NoData	NoData	NoData	9.92
2/17/2024 21:00	NoData	NoData	NoData	NoData	NoData	1.96	-0.14	NoData	501.03	514.51	NoData	NoData	NoData	NoData	-0.11	10.03
2/17/2024 20:00	NoData	NoData	NoData	NoData	NoData	1.92	-0.14	NoData	500.56	512.96	NoData	NoData	NoData	NoData	NoData	9.99
2/17/2024 19:00	NoData	NoData	NoData	NoData	NoData	1.92	NoData	NoData	491.36	508.88	NoData	NoData	NoData	NoData	NoData	9.88
2/17/2024 18:00	NoData	NoData	NoData	NoData	NoData	1.97	-0.13	NoData	506.11	518	0.11	NoData	-0.11	-0.11	NoData	10.12

Data Table 5_hourly

Timestamps	pressure filters.a_pf6 b.flowpv	_bw_supply_ fit.valuescre en	filter turb.pf5atur b.pv	filter turb.pf5btur b.pv	filter turb.pf6atur b.pv	a_rof_ait_10 13b.outputs .value	gac_fit_1020 .outputs.val ue	gac_fit_2020 .outputs.val ue	gac_fit_3020 .outputs.val ue	gac_fit_4020 .outputs.val ue	gac_pdit_11 03.outputs.v alue	gac_pdit_12 03.outputs.v alue	gac_pdit_21 03.outputs.v alue	gac_pdit_22 03.outputs.v alue	gac_pdit_31 03.outputs.v alue	gac_pdit_32 03.outputs.v alue
2/17/2024 17:00	NoData	NoData	NoData	NoData	NoData	2.04	-0.13	NoData	496.97	510.45	NoData	NoData	NoData	NoData	NoData	9.96
2/17/2024 16:00	NoData	0.01	NoData	NoData	NoData	2.04	NoData	-0.04	497.95	511.92	NoData	NoData	-0.11	-0.11	NoData	9.99
2/17/2024 15:00	NoData	0.01	NoData	NoData	NoData	2.06	NoData	NoData	496.31	512.13	0.14	NoData	NoData	NoData	-0.11	9.91
2/17/2024 14:00	NoData	0.01	NoData	NoData	NoData	2.07	NoData	NoData	495.99	511.94	NoData	NoData	NoData	NoData	-0.11	9.94
2/17/2024 13:00	NoData	0.01	NoData	NoData	NoData	2.05	NoData	NoData	500.94	513.59	NoData	NoData	NoData	NoData	NoData	9.97
2/17/2024 12:00	0.04	NoData	NoData	NoData	NoData	2.04	-0.12	NoData	497.64	515.69	NoData	NoData	NoData	NoData	NoData	9.88
2/17/2024 11:00	NoData	0.01	NoData	NoData	NoData	2.02	NoData	NoData	504.07	511.94	NoData	NoData	NoData	NoData	NoData	10.02
2/17/2024 10:00	NoData	NoData	NoData	NoData	NoData	1.97	NoData	NoData	505.27	513.04	NoData	NoData	-0.11	-0.11	NoData	9.99
2/17/2024 9:00	NoData	NoData	NoData	NoData	NoData	1.99	-0.12	NoData	495.92	512.16	NoData	NoData	NoData	NoData	NoData	9.86
2/17/2024 8:00	NoData	NoData	NoData	NoData	NoData	1.84	NoData	NoData	508.82	516.68	NoData	NoData	NoData	NoData	NoData	10.01
2/17/2024 7:00	NoData	0.01	NoData	NoData	NoData	1.8	-0.12	-0.05	499.38	513.68	NoData	NoData	NoData	NoData	NoData	9.93
2/17/2024 6:00	NoData	NoData	NoData	NoData	NoData	1.88	NoData	NoData	495.61	515.48	NoData	NoData	NoData	NoData	NoData	9.96
2/17/2024 5:00	NoData	NoData	NoData	NoData	NoData	1.81	-0.13	NoData	507.87	518.05	NoData	NoData	-0.11	-0.11	NoData	9.92
2/17/2024 4:00	NoData	NoData	NoData	NoData	NoData	1.85	NoData	NoData	499.56	515.1	NoData	NoData	-0.11	-0.11	NoData	9.96
2/17/2024 3:00	NoData	NoData	NoData	NoData	NoData	1.89	NoData	NoData	499.01	515.58	NoData	NoData	NoData	NoData	NoData	9.94
2/17/2024 2:00	NoData	NoData	NoData	NoData	NoData	1.88	-0.12	NoData	508.8	517.09	NoData	NoData	-0.11	-0.11	NoData	9.89
2/17/2024 1:00	0.03	NoData	NoData	NoData	NoData	1.85	-0.13	NoData	500.34	516.45	NoData	NoData	NoData	NoData	-0.11	9.91
2/17/2024 0:00	NoData	NoData	NoData	NoData	NoData	1.8	NoData	NoData	507.04	518.36	NoData	NoData	NoData	NoData	NoData	9.81
2/16/2024 23:00	NoData	NoData	NoData	NoData	NoData	1.81	NoData	NoData	498.83	517.91	NoData	NoData	NoData	NoData	NoData	9.85
2/16/2024 22:00	NoData	NoData	NoData	NoData	NoData	1.81	NoData	NoData	511.86	517.93	NoData	NoData	-0.11	-0.11	NoData	9.9
2/16/2024 21:00	NoData	NoData	NoData	NoData	NoData	1.83	NoData	NoData	518.63	520.82	NoData	NoData	NoData	NoData	NoData	9.62
2/16/2024 20:00	NoData	NoData	NoData	NoData	NoData	1.83	-0.13	NoData	520.3	521.68	NoData	NoData	-0.11	-0.11	NoData	9.28
2/16/2024 19:00	NoData	NoData	NoData	NoData	NoData	1.84	-0.14	NoData	515	519.14	NoData	NoData	NoData	NoData	-0.11	8.93
2/16/2024 18:00	NoData	NoData	NoData	NoData	NoData	1.92	NoData	NoData	520.44	521.83	0.09	NoData	NoData	NoData	-0.11	8.73
2/16/2024 17:00	NoData	NoData	NoData	NoData	NoData	2	-0.13	NoData	518.56	520	NoData	NoData	NoData	NoData	NoData	8.43
2/16/2024 16:00	NoData	1697.61	NoData	NoData	NoData	2.13	NoData	NoData	517.75	521.11	NoData	NoData	NoData	NoData	NoData	8.13
2/16/2024 15:00	NoData	NoData	NoData	NoData	NoData	2.21	-0.12	NoData	524.81	524.07	NoData	NoData	NoData	NoData	NoData	7.91
2/16/2024 14:00	NoData	800.8	NoData	NoData	NoData	2.47	-0.09	NoData	486.79	528.29	0.13	NoData	NoData	NoData	-0.11	7.29
2/16/2024 13:00	NoData	1839.2	NoData	NoData	NoData	3.17	-0.1	NoData	527.04	528.23	NoData	NoData	NoData	NoData	NoData	7.63
2/16/2024 12:00	NoData	NoData	NoData	NoData	NoData	4.67	-0.1	NoData	504.53	505.95	NoData	NoData	NoData	NoData	NoData	7.59
2/16/2024 11:00	NoData	NoData	NoData	NoData	NoData	4.63	-0.1	NoData	408.67	463.78	NoData	NoData	NoData	NoData	NoData	6.52
2/16/2024 10:00	NoData	0.01	NoData	NoData	NoData	3.27	NoData	NoData	32.5	139.97	NoData	2.35	NoData	NoData	NoData	5.11
2/16/2024 9:00	NoData	0.01	NoData	NoData	NoData	2.19	351.68	338.24	324.85	402.08	0.14	5.59	0.98	0.98	-0.11	8.82
2/16/2024 8:00	NoData	0.01	NoData	NoData	NoData	1.96	351.89	351.99	343.2	NoData	0.13	5.74	2.01	2.01	NoData	8.77
2/16/2024 7:00	NoData	NoData	NoData	NoData	NoData	1.76	351.72	349.92	349.66	NoData	0.14	5.53	2.16	2.16	NoData	8.67
2/16/2024 6:00	NoData	NoData	NoData	NoData	NoData	1.5	345.83	473.32	470.18	NoData	0.16	5.69	3.02	3.02	NoData	9.61
2/16/2024 5:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	519.2	524.82	-0.1	NoData	NoData	3.52	3.52	NoData	9.68
2/16/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	518.96	525.75	NoData	NoData	NoData	3.43	3.43	NoData	9.43
2/16/2024 3:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	518.36	525.6	NoData	NoData	NoData	3.24	3.24	NoData	9.19
2/16/2024 2:00	NoData	NoData	NoData	NoData	NoData	1.41	-0.13	519.89	526.28	NoData	NoData	NoData	3.03	3.03	NoData	8.97
2/16/2024 1:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.12	518.61	526.77	NoData	NoData	6.23	2.64	2.64	NoData	8.77
2/16/2024 0:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	522.97	527.12	-0.09	NoData	NoData	2.47	2.47	-0.11	8.54
2/15/2024 23:00	NoData	NoData	NoData	NoData	NoData	1.56	-0.13	522.23	527.26	NoData	NoData	NoData	2.48	2.48	NoData	8.25
2/15/2024 22:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.13	520.81	528.04	NoData	0.13	NoData	2.15	2.15	NoData	7.95
2/15/2024 21:00	NoData	NoData	NoData	NoData	NoData	1.72	-0.13	521.42	528.54	NoData	NoData	NoData	1.84	1.84	-0.11	7.63
2/15/2024 20:00	NoData	NoData	NoData	NoData	NoData	1.93	-0.13	521.32	529.23	NoData	NoData	NoData	1.5	1.5	-0.11	7.29
2/15/2024 19:00	NoData	NoData	NoData	NoData	NoData	2.14	NoData	518.6	529.91	-0.1	NoData	6.32	1.18	1.18	-0.11	6.98
2/15/2024 18:00	NoData	NoData	NoData	NoData	NoData	2.37	NoData	523.7	530.67	-0.09	0.17	6.38	0.8	0.8	-0.11	6.7
2/15/2024 17:00	NoData	NoData	NoData	NoData	NoData	2.48	-0.13	450.67	497.02	NoData	NoData	6.55	0.33	0.33	-0.11	6.3
2/15/2024 16:00	NoData	NoData	NoData	NoData	NoData	2.14	424.71	413.39	NoData	NoData	0.05	9.49	1.26	1.26	NoData	2.96
2/15/2024 15:00	NoData	NoData	NoData	NoData	NoData	2.03	524.53	526.32	-0.12	NoData	0.05	9.56	0.92	0.92	NoData	NoData

Data Table 5_hourly

Timestamps	pressure filters.a_pf6 b.flowpv	_bw_supply fit.valuescre en	filter turb.pf5atur b.pv	filter turb.pf5btur b.pv	filter turb.pf6atur b.pv	a_rof_ait_10 13b.outputs .value	gac_fit_1020 .outputs.val ue	gac_fit_2020 .outputs.val ue	gac_fit_3020 .outputs.val ue	gac_fit_4020 .outputs.val ue	gac_pdit_11 03.outputs.v alue	gac_pdit_12 03.outputs.v alue	gac_pdit_21 03.outputs.v alue	gac_pdit_22 03.outputs.v alue	gac_pdit_31 03.outputs.v alue	gac_pdit_32 03.outputs.v alue
2/15/2024 14:00	NoData	NoData	NoData	NoData	NoData	2.1	523.78	526.11	NoData	NoData	0.05	9.53	0.28	0.28	NoData	NoData
2/15/2024 13:00	NoData	NoData	NoData	NoData	NoData	2.13	520.21	527	-0.1	NoData	0.05	9.34	0.66	0.66	-0.11	NoData
2/15/2024 12:00	NoData	NoData	NoData	NoData	NoData	2.18	520.96	527.37	NoData	NoData	0.06	8.95	0.66	0.66	-0.11	NoData
2/15/2024 11:00	NoData	0.01	NoData	NoData	NoData	2.18	521.06	528.21	NoData	-0.07	0.07	8.69	1.29	1.29	NoData	NoData
2/15/2024 10:00	NoData	0.01	NoData	NoData	NoData	2.19	519.36	528.77	NoData	-0.08	0.08	8.4	2.27	2.27	NoData	NoData
2/15/2024 9:00	NoData	0.01	NoData	NoData	NoData	2.15	519.82	529.5	NoData	NoData	0.08	8.19	-0.11	-0.11	NoData	NoData
2/15/2024 8:00	NoData	0.01	NoData	NoData	NoData	2.02	520.69	529.96	NoData	NoData	0.08	8.11	NoData	NoData	NoData	NoData
2/15/2024 7:00	NoData	NoData	NoData	NoData	NoData	1.79	525.79	531.8	NoData	-0.16	0.08	7.94	-0.11	-0.11	NoData	5.81
2/15/2024 6:00	NoData	NoData	NoData	NoData	NoData	1.85	447.46	424.09	NoData	NoData	0.12	6.82	NoData	NoData	-0.11	NoData
2/15/2024 5:00	NoData	NoData	NoData	NoData	NoData	1.8	453.38	446.91	NoData	-0.17	0.06	9.51	NoData	NoData	NoData	NoData
2/15/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	526.42	526.5	NoData	NoData	0.06	9.59	-0.11	-0.11	-0.11	NoData
2/15/2024 3:00	NoData	NoData	NoData	NoData	NoData	1.72	524.25	526.97	NoData	NoData	0.06	9.43	-0.11	-0.11	NoData	NoData
2/15/2024 2:00	NoData	NoData	NoData	NoData	NoData	1.73	521.87	527.35	NoData	NoData	0.06	9.16	-0.11	-0.11	NoData	NoData
2/15/2024 1:00	NoData	NoData	NoData	NoData	NoData	1.8	518.39	528.26	NoData	NoData	0.06	8.92	NoData	NoData	NoData	NoData
2/15/2024 0:00	NoData	NoData	NoData	NoData	NoData	1.87	516.22	527.94	NoData	NoData	0.06	8.84	-0.11	-0.11	NoData	NoData
2/14/2024 23:00	NoData	NoData	NoData	NoData	NoData	2.12	501.32	511.16	NoData	NoData	0.06	8.63	NoData	NoData	-0.11	NoData
2/14/2024 22:00	NoData	NoData	NoData	NoData	NoData	2.82	501.65	511.34	-0.19	NoData	0.07	8.59	NoData	NoData	NoData	NoData
2/14/2024 21:00	NoData	NoData	NoData	NoData	NoData	4.36	504.27	511.84	NoData	NoData	0.07	8.53	NoData	NoData	NoData	NoData
2/14/2024 20:00	NoData	NoData	NoData	NoData	NoData	3.84	493.89	505.84	NoData	NoData	0.08	8.15	-0.11	-0.11	NoData	NoData
2/14/2024 19:00	NoData	NoData	NoData	NoData	NoData	1.31	398.08	369.62	NoData	-0.12	0.1	8.47	-0.11	-0.11	-0.11	5.85
2/14/2024 18:00	NoData	NoData	NoData	NoData	NoData	1.28	523.33	527.94	NoData	NoData	0.05	9.29	NoData	NoData	-0.11	NoData
2/14/2024 17:00	NoData	NoData	NoData	NoData	NoData	1.44	525.21	526.72	NoData	NoData	0.06	8.9	NoData	NoData	NoData	NoData
2/14/2024 16:00	NoData	NoData	NoData	NoData	NoData	1.35	526.9	525.31	NoData	-0.07	0.07	8.64	NoData	NoData	NoData	NoData
2/14/2024 15:00	NoData	NoData	NoData	NoData	NoData	2.04	528.79	521.24	NoData	-0.06	0.08	8.34	NoData	NoData	NoData	NoData
2/14/2024 14:00	NoData	NoData	NoData	NoData	NoData	2.74	529.05	524.13	-0.08	NoData	0.1	8.01	NoData	NoData	NoData	NoData
2/14/2024 13:00	NoData	0.01	NoData	NoData	NoData	2.37	529.41	525.05	NoData	NoData	0.1	7.73	NoData	NoData	-0.11	NoData
2/14/2024 12:00	NoData	0.01	NoData	NoData	NoData	1.36	529.67	526.24	NoData	NoData	0.11	7.45	NoData	NoData	NoData	NoData
2/14/2024 11:00	NoData	0.01	NoData	NoData	NoData	1.3	528.9	527.35	-0.12	NoData	0.12	7.16	NoData	NoData	NoData	NoData
2/14/2024 10:00	NoData	0.01	NoData	NoData	NoData	1.85	529.52	525.58	NoData	NoData	0.13	6.89	NoData	NoData	-0.11	5.91
2/14/2024 9:00	NoData	0.01	NoData	NoData	NoData	2.59	530.96	525.05	NoData	NoData	0.13	6.69	NoData	NoData	NoData	NoData
2/14/2024 8:00	NoData	NoData	NoData	NoData	NoData	3	533.43	528.85	NoData	-0.1	0.13	6.46	-0.11	-0.11	-0.11	5.95
2/14/2024 7:00	0.01	NoData	NoData	NoData	NoData	3.07	471.59	459.3	-0.15	-0.11	0.16	5.61	NoData	NoData	NoData	6.08
2/14/2024 6:00	NoData	NoData	NoData	NoData	NoData	1.99	-0.14	362.01	370.33	NoData	NoData	NoData	NoData	NoData	NoData	9.95
2/14/2024 5:00	NoData	NoData	NoData	NoData	NoData	1.71	NoData	527.81	527.52	NoData	NoData	NoData	NoData	NoData	NoData	10.18
2/14/2024 4:00	NoData	NoData	NoData	NoData	NoData	1.72	-0.14	528.14	523.91	-0.12	NoData	NoData	NoData	NoData	NoData	10.01
2/14/2024 3:00	NoData	NoData	NoData	NoData	NoData	1.73	-0.14	527.28	523.01	NoData	NoData	NoData	NoData	NoData	-0.11	9.91
2/14/2024 2:00	NoData	NoData	NoData	NoData	NoData	1.72	NoData	528.35	520.93	NoData	NoData	NoData	NoData	NoData	NoData	9.78
2/14/2024 1:00	NoData	NoData	NoData	NoData	NoData	1.75	-0.16	528.71	518.45	NoData	NoData	NoData	NoData	NoData	NoData	9.66
2/14/2024 0:00	NoData	NoData	NoData	NoData	NoData	1.76	NoData	526.65	515.28	NoData	NoData	NoData	NoData	NoData	NoData	9.6
2/13/2024 23:00	NoData	NoData	NoData	NoData	NoData	1.77	-0.16	516.25	505.33	NoData	NoData	NoData	NoData	NoData	NoData	9.44
2/13/2024 22:00	NoData	NoData	NoData	NoData	NoData	1.76	NoData	516.31	504.53	NoData	NoData	NoData	NoData	NoData	-0.11	9.38
2/13/2024 21:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	516.41	504.93	NoData	NoData	NoData	NoData	NoData	NoData	9.35
2/13/2024 20:00	NoData	NoData	NoData	NoData	NoData	1.75	-0.15	516.53	504.43	-0.13	NoData	NoData	NoData	NoData	NoData	9.31
2/13/2024 19:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	516.76	504.17	NoData	0.17	NoData	-0.11	-0.11	NoData	9.29
2/13/2024 18:00	NoData	NoData	NoData	NoData	NoData	1.8	NoData	516.94	503.63	NoData	NoData	NoData	-0.11	-0.11	-0.11	9.28
2/13/2024 17:00	NoData	NoData	NoData	NoData	NoData	1.85	-0.14	516.91	506.07	-0.08	0.19	NoData	NoData	NoData	NoData	9.28
2/13/2024 16:00	NoData	NoData	NoData	NoData	NoData	1.71	-0.12	518.21	507.25	NoData	0.16	NoData	NoData	NoData	-0.11	9.1
2/13/2024 15:00	NoData	1410.6	NoData	NoData	NoData	2.06	-0.12	402.43	385.52	NoData	NoData	NoData	0.07	0.07	NoData	8.12
2/13/2024 14:00	NoData	1233.3	NoData	NoData	NoData	1.93	NoData	523.22	526.94	NoData	NoData	2.22	NoData	NoData	NoData	9.6
2/13/2024 13:00	NoData	1267.93	NoData	NoData	NoData	2	-0.1	521.55	528.84	NoData	NoData	NoData	NoData	NoData	NoData	9.28
2/13/2024 12:00	NoData	0.01	NoData	NoData	NoData	2.12	-0.11	523.04	528.96	NoData	0.2	NoData	NoData	NoData	-0.11	8.98

Data Table 5_hourly

Timestamps	pressure filters.a_pf6 b.flowpv	_bw_supply_ fit.valuescre en	filter turb.pf5atur b.pv	filter turb.pf5btur b.pv	filter turb.pf6atur b.pv	a_rof_ait_10 13b.outputs .value	gac_fit_1020 .outputs.val ue	gac_fit_2020 .outputs.val ue	gac_fit_3020 .outputs.val ue	gac_fit_4020 .outputs.val ue	gac_pdit_11 03.outputs.v alue	gac_pdit_12 03.outputs.v alue	gac_pdit_21 03.outputs.v alue	gac_pdit_22 03.outputs.v alue	gac_pdit_31 03.outputs.v alue	gac_pdit_32 03.outputs.v alue
2/13/2024 11:00	NoData	NoData	NoData	NoData	NoData	2.08	-0.11	522.74	529.37	NoData	NoData	2.27	NoData	NoData	NoData	8.74
2/13/2024 10:00	NoData	NoData	NoData	NoData	NoData	2.12	-0.12	522.13	529.69	NoData	NoData	2.39	-0.11	-0.11	-0.11	8.51
2/13/2024 9:00	0.02	0.01	NoData	NoData	NoData	1.91	-0.13	520.74	529.74	NoData	NoData	NoData	NoData	NoData	NoData	8.33
2/13/2024 8:00	NoData	0.01	NoData	NoData	NoData	1.84	-0.13	520.98	530.75	NoData	NoData	2.37	NoData	NoData	NoData	8.07
2/13/2024 7:00	NoData	NoData	NoData	NoData	NoData	1.77	-0.16	458.23	478.71	NoData	NoData	NoData	-0.11	-0.11	NoData	7.44
2/13/2024 6:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.17	519.51	527.71	-0.17	NoData	NoData	0.26	0.26	NoData	8.87
2/13/2024 5:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	521.49	529.1	NoData	NoData	NoData	NoData	NoData	NoData	8.74
2/13/2024 4:00	NoData	NoData	NoData	NoData	NoData	1.57	-0.16	520.39	529.51	NoData	NoData	NoData	-0.11	-0.11	NoData	8.59
2/13/2024 3:00	NoData	NoData	NoData	NoData	NoData	1.56	NoData	520.9	529.44	-0.18	NoData	NoData	NoData	NoData	-0.11	8.43
2/13/2024 2:00	NoData	NoData	NoData	NoData	NoData	1.57	NoData	521.42	529.57	NoData	NoData	2.35	NoData	NoData	-0.11	8.28
2/13/2024 1:00	NoData	NoData	NoData	NoData	NoData	1.57	-0.16	520.64	529.88	NoData	NoData	NoData	-0.11	-0.11	NoData	8.13
2/13/2024 0:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	520.49	529.99	-0.15	NoData	NoData	NoData	NoData	NoData	7.98
2/12/2024 23:00	NoData	NoData	NoData	NoData	NoData	1.6	-0.15	520.57	530.12	-0.15	NoData	NoData	NoData	NoData	NoData	7.83
2/12/2024 22:00	NoData	NoData	NoData	NoData	NoData	1.68	-0.15	519.81	530.39	NoData	NoData	NoData	NoData	NoData	NoData	7.69
2/12/2024 21:00	NoData	NoData	NoData	NoData	NoData	1.88	NoData	519.31	530.82	NoData	0.16	NoData	-0.11	-0.11	NoData	7.55
2/12/2024 20:00	NoData	NoData	NoData	NoData	NoData	2.35	NoData	519.86	530.69	NoData	NoData	NoData	NoData	NoData	-0.11	7.41
2/12/2024 19:00	NoData	1383.14	NoData	NoData	NoData	2.64	NoData	519.3	531.3	NoData	NoData	NoData	NoData	NoData	NoData	7.28
2/12/2024 18:00	NoData	NoData	NoData	NoData	NoData	2.96	NoData	519.09	531.6	NoData	NoData	NoData	-0.11	-0.11	NoData	7.17
2/12/2024 17:00	0.03	NoData	NoData	NoData	NoData	3.11	-0.13	519.16	531.58	NoData	NoData	2.39	NoData	NoData	NoData	7.05
2/12/2024 16:00	0.02	NoData	NoData	NoData	NoData	3.04	NoData	519.33	531.81	NoData	0.16	NoData	NoData	NoData	-0.11	6.94
2/12/2024 15:00	NoData	1390.17	NoData	NoData	NoData	2.94	NoData	519.46	532.04	NoData	NoData	NoData	NoData	NoData	NoData	6.81
2/12/2024 14:00	NoData	NoData	NoData	NoData	NoData	2.59	-0.1	520.36	532.46	-0.02	NoData	NoData	NoData	NoData	-0.11	6.7
2/12/2024 13:00	0.05	NoData	NoData	NoData	NoData	2.13	-0.09	520.7	532.87	NoData	NoData	2.45	NoData	NoData	NoData	6.58
2/12/2024 12:00	NoData	NoData	NoData	NoData	NoData	0.68	-0.1	523.27	533	-0.04	0.2	NoData	NoData	NoData	NoData	6.44
2/12/2024 11:00	NoData	NoData	NoData	NoData	NoData	0.34	NoData	527.03	534.22	NoData	NoData	NoData	NoData	NoData	NoData	6.25
2/12/2024 10:00	NoData	0.01	NoData	NoData	NoData	NoData	NoData	528.1	537.29	NoData	NoData	NoData	NoData	NoData	NoData	5.96
2/12/2024 9:00	NoData	0.01	NoData	NoData	NoData	0.32	-0.14	336.51	475.58	NoData	NoData	NoData	NoData	NoData	NoData	4.98
2/12/2024 8:00	NoData	0.01	NoData	NoData	NoData	0.18	NoData	NoData	NoData	NoData	NoData	2.38	-0.11	-0.11	-0.11	4.04
2/12/2024 7:00	NoData	0.01	NoData	NoData	NoData	0.04	NoData	NoData	NoData	NoData	0.2	NoData	NoData	NoData	NoData	NoData
2/12/2024 6:00	-0.02	NoData	NoData	NoData	NoData	NoData	-0.16	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	NoData	NoData
2/12/2024 5:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.16	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	NoData	NoData
2/12/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	-0.11	NoData
2/12/2024 3:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.17	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	-0.11	NoData
2/12/2024 2:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 1:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.16	NoData	NoData	-0.17	NoData	NoData	-0.11	-0.11	NoData	NoData
2/12/2024 0:00	NoData	NoData	NoData	NoData	NoData	0.02	NoData	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	NoData	NoData
2/11/2024 23:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.16	NoData	NoData	NoData	NoData	NoData	4.01
2/11/2024 22:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.15	NoData	NoData	-0.15	NoData	NoData	-0.11	-0.11	NoData	NoData
2/11/2024 21:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.15	NoData	NoData	NoData	NoData	2.37	NoData	NoData	-0.11	NoData
2/11/2024 20:00	0.02	NoData	NoData	NoData	NoData	NoData	-0.15	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	NoData	NoData
2/11/2024 19:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	-0.11	NoData
2/11/2024 18:00	NoData	NoData	NoData	NoData	NoData	0.05	-0.15	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.11	NoData
2/11/2024 17:00	NoData	NoData	NoData	NoData	NoData	0.14	NoData	NoData	NoData	NoData	0.16	NoData	-0.11	-0.11	-0.11	NoData
2/11/2024 16:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.12	NoData	NoData	-0.07	NoData	2.43	NoData	NoData	-0.11	NoData
2/11/2024 15:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.11	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 14:00	NoData	0.01	NoData	NoData	NoData	NoData	-0.11	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 13:00	NoData	0.01	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.19	NoData	NoData	NoData	NoData	NoData
2/11/2024 12:00	NoData	0.01	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.45	NoData	NoData	-0.11	NoData
2/11/2024 11:00	NoData	0.01	NoData	NoData	NoData	0.28	-0.11	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 10:00	NoData	0.01	NoData	NoData	NoData	0.29	-0.12	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 9:00	NoData	0.01	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Data Table 5_hourly

Timestamps	pressure filters.a_pf6 b.flowpv	bw_supply fit.valuescre en	filter turb.pf5atur b.pv	filter turb.pf5btur b.pv	filter turb.pf6atur b.pv	a_rof_ait_10 13b.outputs .value	gac_fit_1020 .outputs.val ue	gac_fit_2020 .outputs.val ue	gac_fit_3020 .outputs.val ue	gac_fit_4020 .outputs.val ue	gac_pdit_11 03.outputs.v alue	gac_pdit_12 03.outputs.v alue	gac_pdit_21 03.outputs.v alue	gac_pdit_22 03.outputs.v alue	gac_pdit_31 03.outputs.v alue	gac_pdit_32 03.outputs.v alue
2/11/2024 8:00	NoData	0.01	NoData	NoData	NoData	0.19	-0.15	NoData	NoData	NoData	NoData	2.4	NoData	NoData	NoData	4.07
2/11/2024 7:00	NoData	0.01	NoData	NoData	NoData	0.09	-0.17	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 6:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 5:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.06	NoData	NoData	NoData	NoData	NoData	NoData	NoData	4.05
2/11/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.16	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	NoData	NoData
2/11/2024 3:00	-0.03	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 2:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.16	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 1:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.11	NoData
2/11/2024 0:00	NoData	NoData	NoData	NoData	NoData	NoData	-0.15	NoData	NoData	NoData	NoData	NoData	-0.11	-0.11	-0.11	NoData
2/10/2024 23:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	-0.11	NoData
2/10/2024 22:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	2.4	NoData	NoData	NoData	NoData

Data Table 5_hourly

Timestamps	ro.a_rof_ait_1103.values screen	gac_pdit_41 03.outputs.v alue	gac_pdit_42 03.outputs.v alue	cl2_resid_ait .valuescree n	a_rof_ait_10 16a.outputs .value	a_rof_ait_10 16b.outputs .value	a_rof_ait_10 16c.outputs .value	a_rof_ait_10 15.outputs.v alue	ro.a_rof_ait_1102.values screen	ro.a_rof_ait_1109.values screen	ro.a_rof_ait_1104.values screen	ro.a_rof_ait_1107.values screen	ro.a_rof_ait_1105.values screen
2/19/2024 20:00	0.12	NoData	NoData	0.76	NoData	NoData	NoData	0.03	582.4	661.4	7.36	43.72	1512.67
2/19/2024 19:00	0.21	NoData	NoData	0.28	NoData	NoData	NoData	NoData	614.64	658.61	6.7	44.55	1516.33
2/19/2024 18:00	0.27	NoData	4.04	0.85	NoData	NoData	NoData	0.01	589.7	606.63	6.57	44.71	1461.86
2/19/2024 17:00	0.29	NoData	NoData	0.95	-0.25	NoData	NoData	0.08	591.81	601.85	6.61	44.77	1440.55
2/19/2024 16:00	0.24	NoData	NoData	0.67	NoData	NoData	NoData	NoData	615.74	638.54	6.59	44.79	1555.8
2/19/2024 15:00	0.21	NoData	NoData	0.5	NoData	NoData	NoData	0.04	635.02	670.26	6.62	44.83	1646.88
2/19/2024 14:00	0.23	NoData	NoData	0.19	NoData	NoData	NoData	0.01	641.19	682.69	6.61	44.98	1666.05
2/19/2024 13:00	0.26	NoData	NoData	0.43	-0.25	NoData	NoData	0.03	643.64	678.59	6.55	45	1686.24
2/19/2024 12:00	0.28	NoData	NoData	0.69	NoData	NoData	NoData	NoData	617.02	652.71	6.61	44.98	1634.06
2/19/2024 11:00	0.21	NoData	NoData	0.42	NoData	NoData	NoData	NoData	603.38	637.3	6.61	45.05	1593.46
2/19/2024 10:00	NoData	NoData	NoData	0.5	NoData	NoData	NoData	NoData	593.04	610.36	6.56	45.03	1565.27
2/19/2024 9:00	NoData	NoData	NoData	0.5	NoData	NoData	NoData	NoData	595.01	610.89	6.56	44.87	1556.57
2/19/2024 8:00	0.18	NoData	NoData	0.47	NoData	NoData	NoData	0.08	598.61	619.18	6.61	44.96	1548.44
2/19/2024 7:00	0.17	NoData	NoData	0.47	NoData	NoData	NoData	NoData	590.74	612.75	6.59	45.03	1539.78
2/19/2024 6:00	0.17	NoData	NoData	0.49	NoData	NoData	NoData	NoData	585.8	600.97	6.58	44.91	1539.98
2/19/2024 5:00	NoData	NoData	NoData	0.52	NoData	NoData	NoData	NoData	585.86	598.67	6.58	44.91	1537.43
2/19/2024 4:00	0.18	NoData	NoData	0.54	NoData	NoData	NoData	NoData	588.12	603.12	6.58	44.97	1534.77
2/19/2024 3:00	0.16	NoData	NoData	0.52	NoData	NoData	NoData	NoData	589.15	604.88	6.59	45.09	1529.33
2/19/2024 2:00	NoData	NoData	NoData	0.53	NoData	NoData	NoData	NoData	589.57	609.24	6.59	45.28	1523.94
2/19/2024 1:00	0.18	NoData	NoData	0.55	NoData	NoData	NoData	NoData	586.35	604.06	6.59	45.34	1520.35
2/19/2024 0:00	0.18	NoData	NoData	0.53	NoData	NoData	NoData	NoData	585.48	604.02	6.59	45.29	1521.4
2/18/2024 23:00	NoData	NoData	NoData	0.54	NoData	NoData	NoData	NoData	583.63	601.71	6.6	45.28	1519.85
2/18/2024 22:00	NoData	NoData	NoData	0.55	NoData	-0.62	NoData	NoData	580.85	598.08	6.59	45.3	1514.83
2/18/2024 21:00	0.18	NoData	NoData	0.55	NoData	NoData	NoData	NoData	579.58	595.93	6.6	45.45	1501.57
2/18/2024 20:00	0.17	NoData	NoData	0.56	NoData	NoData	NoData	0.03	578.96	596.4	6.62	45.5	1485.22
2/18/2024 19:00	NoData	NoData	NoData	0.58	NoData	NoData	NoData	NoData	578.66	596.8	6.58	45.46	1469.01
2/18/2024 18:00	NoData	NoData	NoData	0.61	NoData	NoData	NoData	NoData	573.87	592.47	6.59	45.57	1442.87
2/18/2024 17:00	0.2	NoData	NoData	0.7	NoData	NoData	NoData	NoData	567.09	584.98	6.59	45.75	1411.47
2/18/2024 16:00	NoData	NoData	4.07	0.71	NoData	NoData	NoData	NoData	561.6	582.26	6.59	46.03	1375.75
2/18/2024 15:00	0.17	NoData	NoData	0.71	NoData	NoData	NoData	NoData	554.17	575.13	6.59	46.31	1336.1
2/18/2024 14:00	0.15	NoData	4.08	0.59	NoData	NoData	NoData	NoData	547.96	570.03	6.59	46.49	1296.06
2/18/2024 13:00	NoData	NoData	NoData	0.57	NoData	NoData	NoData	0.06	546.65	565.74	6.59	46.42	1283.07
2/18/2024 12:00	0.11	0.03	8.8	0.57	NoData	NoData	NoData	0.08	546.96	564.87	6.59	46.54	1280.55
2/18/2024 11:00	NoData	0.02	9.36	0.6	NoData	NoData	NoData	NoData	547.78	565.2	6.6	46.49	1287.91
2/18/2024 10:00	NoData	0.02	9.31	0.6	NoData	NoData	NoData	NoData	549.57	566.25	6.59	45.93	1315.9
2/18/2024 9:00	NoData	0.02	9.34	0.64	NoData	NoData	NoData	NoData	550.82	568.25	6.61	45.64	1336.94
2/18/2024 8:00	NoData	0.02	9.3	0.68	NoData	NoData	NoData	NoData	552.78	568.22	6.57	45.5	1356.72
2/18/2024 7:00	NoData	0.02	9.3	0.74	NoData	-0.62	NoData	0.09	554.75	568.28	6.58	45.14	1378.98
2/18/2024 6:00	0.14	0.02	9.34	0.44	NoData	NoData	NoData	0.09	560.76	576.03	6.58	45.05	1398.92
2/18/2024 5:00	NoData	0.02	9.34	0.53	NoData	NoData	NoData	NoData	565.77	579.92	6.57	45.15	1411.91
2/18/2024 4:00	0.17	0.02	9.24	0.66	NoData	NoData	NoData	NoData	567.34	583.46	6.6	45.17	1425.72
2/18/2024 3:00	0.19	0.02	9.34	0.72	NoData	NoData	NoData	NoData	565.63	581.5	6.6	45.12	1428.6
2/18/2024 2:00	NoData	0.02	9.28	0.76	NoData	NoData	NoData	NoData	563.65	575.49	6.6	45.1	1415.05
2/18/2024 1:00	NoData	0.01	9.32	0.78	NoData	NoData	NoData	0.09	564.08	574.02	6.6	45.1	1403.42
2/18/2024 0:00	NoData	0.02	9.24	0.73	-0.25	NoData	NoData	NoData	565.5	576.94	6.6	45.13	1400.1
2/17/2024 23:00	0.18	0.02	9.31	0.69	NoData	NoData	NoData	NoData	566.91	579.74	6.6	45.23	1399.84
2/17/2024 22:00	0.18	0.02	9.27	0.68	NoData	NoData	NoData	NoData	567.29	580.84	6.62	45.23	1406.56
2/17/2024 21:00	NoData	0.02	9.31	0.7	NoData	NoData	NoData	NoData	568.34	580.72	6.57	45.23	1414.77
2/17/2024 20:00	NoData	0.02	9.28	0.71	-0.25	NoData	NoData	NoData	568.33	580.86	6.6	45.24	1420.07
2/17/2024 19:00	NoData	0.02	9.28	0.69	NoData	NoData	NoData	NoData	568.47	581.22	6.6	45.31	1418.83
2/17/2024 18:00	0.18	0.01	9.32	0.65	-0.25	NoData	NoData	0.07	570.5	581.95	6.6	45.44	1410.61

Data Table 5_hourly

Timestamps	ro.a_rof_ait_1103.values screen	gac_pdit_4103.outputs.v alue	gac_pdit_4203.outputs.v alue	cl2_resid_ait valuescreen	a_rof_ait_1016a.outputs .value	a_rof_ait_1016b.outputs .value	a_rof_ait_1016c.outputs .value	a_rof_ait_1015.outputs.v alue	ro.a_rof_ait_1102.values screen	ro.a_rof_ait_1109.values screen	ro.a_rof_ait_1104.values screen	ro.a_rof_ait_1107.values screen	ro.a_rof_ait_1105.values screen
2/17/2024 17:00	NoData	0.02	9.27	0.6	NoData	NoData	NoData	NoData	575.84	589.68	6.6	45.46	1414.13
2/17/2024 16:00	0.19	0.02	9.3	0.59	NoData	NoData	NoData	0.05	577.49	598.02	6.6	45.59	1411.91
2/17/2024 15:00	0.24	0.02	9.25	0.74	NoData	NoData	NoData	NoData	566.34	593.43	6.55	46.22	1354.68
2/17/2024 14:00	0.14	0.02	9.32	0.65	NoData	NoData	NoData	0.05	554.17	577.15	6.62	46.17	1300.89
2/17/2024 13:00	0.13	0.02	9.24	0.43	NoData	NoData	NoData	0.05	552.64	578.96	6.57	45.91	1289.01
2/17/2024 12:00	0.1	0.03	9.28	0.4	NoData	NoData	NoData	0.04	548.68	571.14	6.58	45.7	1309.06
2/17/2024 11:00	NoData	0.02	9.27	0.56	NoData	NoData	NoData	NoData	545.65	562.86	6.6	45.49	1343.5
2/17/2024 10:00	0.14	0.02	9.26	0.75	NoData	NoData	NoData	0.08	542.99	553.25	6.62	45.31	1361.52
2/17/2024 9:00	0.13	0.02	9.17	0.75	NoData	NoData	NoData	0.09	548.53	557.19	6.55	45.14	1375.3
2/17/2024 8:00	NoData	0.02	9	0.2	NoData	NoData	NoData	NoData	553.02	559.76	6.53	45.07	1400.65
2/17/2024 7:00	NoData	0.02	8.72	0.58	NoData	NoData	NoData	NoData	556.67	563.3	6.6	45.14	1410.54
2/17/2024 6:00	0.14	0.01	8.54	0.59	NoData	NoData	NoData	NoData	561.96	569.39	6.59	45.19	1426.44
2/17/2024 5:00	0.16	0.02	8.3	0.57	NoData	NoData	NoData	NoData	565.7	576.11	6.59	45.14	1435.66
2/17/2024 4:00	NoData	0.01	7.91	0.6	NoData	NoData	NoData	NoData	564.44	575.13	6.59	45.1	1437.49
2/17/2024 3:00	NoData	0.02	7.64	0.64	NoData	NoData	NoData	NoData	562.86	573.97	6.59	45.13	1432.99
2/17/2024 2:00	0.18	0.02	7.41	0.67	NoData	NoData	NoData	NoData	561.74	574.35	6.59	45.1	1425.34
2/17/2024 1:00	NoData	0.01	7.16	0.74	NoData	NoData	NoData	NoData	559.12	571.54	6.59	45.13	1416.25
2/17/2024 0:00	NoData	0.02	6.92	0.8	NoData	NoData	NoData	NoData	557.38	570.23	6.62	45.2	1414.74
2/16/2024 23:00	NoData	0.02	6.99	0.81	NoData	NoData	NoData	NoData	558.83	569.48	6.55	45.24	1417.77
2/16/2024 22:00	NoData	0.02	6.94	0.83	NoData	NoData	NoData	NoData	558.8	570.72	6.6	45.35	1417.67
2/16/2024 21:00	0.2	0.01	6.82	0.79	NoData	NoData	NoData	0.06	561.89	572.6	6.6	45.34	1422.46
2/16/2024 20:00	NoData	0.01	6.63	0.79	NoData	NoData	NoData	NoData	566.07	575.3	6.6	45.39	1428.86
2/16/2024 19:00	0.21	0.01	6.39	0.77	NoData	NoData	NoData	0.06	573.03	587.56	6.55	45.35	1446.38
2/16/2024 18:00	NoData	0.01	6.21	0.75	NoData	NoData	NoData	0.09	569.49	580.1	6.63	45.4	1446.54
2/16/2024 17:00	NoData	0.02	5.98	0.73	NoData	NoData	NoData	0.07	574.01	587.13	6.59	45.55	1449.28
2/16/2024 16:00	NoData	0.02	5.75	0.85	NoData	NoData	NoData	0.07	575.38	587.59	6.51	45.79	1436.64
2/16/2024 15:00	NoData	0.02	5.55	0.91	NoData	NoData	NoData	0.04	570.45	583.92	6.6	46.23	1373.07
2/16/2024 14:00	NoData	0.01	5.4	0.91	NoData	NoData	NoData	NoData	567.68	582.16	6.6	46.38	1363.06
2/16/2024 13:00	0.12	0.01	5.27	0.84	NoData	NoData	NoData	0.05	575.47	588.51	6.6	46.62	1313.94
2/16/2024 12:00	NoData	0.08	5.36	0.7	NoData	NoData	NoData	0.07	585.58	601.83	6.59	46.89	1305.87
2/16/2024 11:00	NoData	0.03	4.7	0.75	NoData	NoData	NoData	0.06	596.61	624.55	6.6	46.73	1427.05
2/16/2024 10:00	NoData	0.19	2.82	0.74	NoData	NoData	NoData	0.06	591.3	630.58	6.6	46.2	1469.56
2/16/2024 9:00	NoData	0.14	5.16	0.83	NoData	NoData	NoData	0.18	562.75	580.97	6.61	45.87	1445.9
2/16/2024 8:00	NoData	NoData	1.95	0.53	NoData	NoData	NoData	0.48	564.33	567.35	6.48	45.43	1405.15
2/16/2024 7:00	NoData	NoData	NoData	0.65	NoData	NoData	NoData	0.14	566.87	577.55	6.71	45.09	1434.31
2/16/2024 6:00	NoData	NoData	NoData	0.72	NoData	NoData	NoData	0.08	572.73	576.16	6.63	45.13	1443.61
2/16/2024 5:00	NoData	NoData	NoData	0.8	NoData	NoData	NoData	NoData	572.8	579.11	6.76	45.09	1466.73
2/16/2024 4:00	NoData	NoData	NoData	0.82	NoData	NoData	NoData	0.05	576.23	581.6	6.69	45.05	1469.01
2/16/2024 3:00	NoData	NoData	NoData	0.72	NoData	NoData	NoData	NoData	582.36	590.61	6.71	45.04	1469.82
2/16/2024 2:00	NoData	NoData	NoData	0.58	NoData	NoData	NoData	NoData	585.89	603.71	6.7	45.11	1470.69
2/16/2024 1:00	NoData	NoData	NoData	0.7	NoData	NoData	NoData	NoData	576.68	587.52	6.7	45.14	1460.69
2/16/2024 0:00	NoData	NoData	NoData	0.84	NoData	NoData	NoData	NoData	573.57	580.74	6.72	45.23	1474.34
2/15/2024 23:00	NoData	NoData	NoData	0.83	NoData	NoData	NoData	NoData	577.02	584.63	6.7	45.25	1476.65
2/15/2024 22:00	NoData	NoData	NoData	0.78	NoData	NoData	NoData	NoData	585.24	599.97	6.66	45.22	1496.92
2/15/2024 21:00	NoData	NoData	NoData	0.78	NoData	NoData	NoData	NoData	586.73	604.8	6.59	45.3	1503.25
2/15/2024 20:00	NoData	NoData	NoData	0.81	NoData	NoData	NoData	0.03	580.44	597.04	6.59	45.28	1476.08
2/15/2024 19:00	NoData	NoData	4.36	0.85	NoData	NoData	NoData	NoData	572.76	590.05	6.6	45.3	1450.71
2/15/2024 18:00	NoData	NoData	NoData	0.79	0	3.2	17.55	0.07	566.17	583.63	6.59	45.22	1411.02
2/15/2024 17:00	NoData	NoData	NoData	0.66	NoData	3.97	20.79	0.08	566.43	583.95	6.58	45.18	1405.14
2/15/2024 16:00	NoData	NoData	NoData	0.18	NoData	2.5	19.14	0.31	558.94	588.37	6.66	45.45	1382.16
2/15/2024 15:00	NoData	NoData	NoData	0.44	NoData	NoData	17.12	1.35	586.3	598.95	6.45	46.28	1343.86

Data Table 5_hourly

Timestamps	ro.a_rof_ait_1103.values screen	gac_pdit_41 03.outputs.v alue	gac_pdit_42 03.outputs.v alue	cl2_resid_ait .valuescree n	a_rof_ait_10 16a.outputs .value	a_rof_ait_10 16b.outputs .value	a_rof_ait_10 16c.outputs .value	a_rof_ait_10 15.outputs.v alue	ro.a_rof_ait_1102.values screen	ro.a_rof_ait_1109.values screen	ro.a_rof_ait_1104.values screen	ro.a_rof_ait_1107.values screen	ro.a_rof_ait_1105.values screen
2/15/2024 14:00	NoData	NoData	NoData	0.67	NoData	2.5	21.42	NoData	583.55	606.59	6.59	46.33	1391.7
2/15/2024 13:00	NoData	NoData	NoData	0.72	NoData	4.27	19.57	0.05	588.19	610.31	6.58	46.32	1369.06
2/15/2024 12:00	NoData	NoData	NoData	0.89	NoData	2.5	NoData	0.12	577.26	597.41	6.62	47.23	1335.19
2/15/2024 11:00	NoData	NoData	NoData	0.96	NoData	2.58	NoData	0.05	572.75	592.67	6.58	46.62	1391.14
2/15/2024 10:00	NoData	NoData	NoData	1.07	NoData	2.5	NoData	0.22	562.1	579.27	6.61	45.84	1434.91
2/15/2024 9:00	NoData	NoData	NoData	0.4	NoData	NoData	NoData	0.08	554.91	568.84	6.62	45.21	1424.43
2/15/2024 8:00	NoData	NoData	NoData	0.24	NoData	NoData	NoData	0.07	558.2	571.84	6.78	44.77	1474.71
2/15/2024 7:00	NoData	NoData	4.4	0.95	NoData	NoData	NoData	0.04	580.73	592.56	6.67	44.26	1496.56
2/15/2024 6:00	0.13	NoData	NoData	0.86	NoData	NoData	NoData	0.05	592.47	607.39	6.64	44.15	1523.73
2/15/2024 5:00	NoData	NoData	NoData	0.86	NoData	2.5	NoData	0.02	581.05	594.37	6.68	44.13	1535.05
2/15/2024 4:00	NoData	NoData	NoData	0.84	NoData	NoData	NoData	0.04	578.05	591.54	6.69	44.16	1526.95
2/15/2024 3:00	NoData	NoData	NoData	0.87	NoData	2.5	NoData	NoData	574.83	585.29	6.68	44.17	1510.01
2/15/2024 2:00	NoData	NoData	NoData	0.9	NoData	NoData	NoData	NoData	572.82	579.52	6.67	44.3	1492.86
2/15/2024 1:00	NoData	NoData	NoData	0.87	NoData	0.94	NoData	NoData	574.41	581.82	6.71	44.33	1493.04
2/15/2024 0:00	NoData	NoData	NoData	0.78	NoData	2.5	NoData	0.06	577.23	582.17	6.69	44.5	1497.26
2/14/2024 23:00	NoData	NoData	NoData	0.82	NoData	NoData	NoData	NoData	584.27	592.55	6.68	44.8	1524.87
2/14/2024 22:00	NoData	NoData	NoData	0.74	NoData	2.56	NoData	NoData	594.63	610.7	6.69	45.01	1535.74
2/14/2024 21:00	NoData	NoData	NoData	0.69	NoData	2.66	NoData	0.05	597.9	615.59	6.75	45	1523.45
2/14/2024 20:00	NoData	NoData	NoData	0.67	NoData	2.58	NoData	0.06	607.42	637.51	6.76	45	1521.85
2/14/2024 19:00	NoData	NoData	4.36	0.66	NoData	2.5	NoData	0.05	588.19	621.87	6.65	45.26	1487.51
2/14/2024 18:00	NoData	NoData	NoData	0.75	NoData	NoData	NoData	2.06	568.48	578.74	6.61	45.24	1442.23
2/14/2024 17:00	NoData	NoData	NoData	0.42	NoData	3.77	NoData	0.66	558.41	573.78	6.79	45.32	1464.1
2/14/2024 16:00	NoData	NoData	NoData	0.73	NoData	3.12	1.04	0.09	566.33	580.4	6.73	45.68	1431.15
2/14/2024 15:00	NoData	NoData	NoData	0.52	NoData	4.21	NoData	0.09	566.07	573.66	6.72	46.61	1383.62
2/14/2024 14:00	NoData	NoData	NoData	0.57	NoData	4.57	NoData	0.21	552.04	579.88	6.91	46.5	1384.96
2/14/2024 13:00	NoData	NoData	NoData	0.89	NoData	4.65	NoData	0.5	565.39	581.7	6.64	46.61	1367.33
2/14/2024 12:00	NoData	NoData	NoData	0.65	NoData	4.7	NoData	0.83	560.21	575.66	6.52	47.26	1363.94
2/14/2024 11:00	NoData	NoData	NoData	0.62	NoData	4.29	NoData	0.05	571.84	591.9	6.54	46.19	1409.63
2/14/2024 10:00	NoData	NoData	NoData	0.9	NoData	4.13	NoData	NoData	571.5	586.98	6.62	45.77	1423.39
2/14/2024 9:00	NoData	NoData	NoData	0.82	NoData	4.32	NoData	0.07	574.14	589.19	6.56	45.49	1417.48
2/14/2024 8:00	NoData	NoData	NoData	0.79	NoData	4.23	NoData	0.05	574.57	585.3	6.63	45.14	1451.08
2/14/2024 7:00	NoData	NoData	4.4	0.93	NoData	4.53	NoData	0.05	584.12	604.77	6.62	44.81	1503.54
2/14/2024 6:00	NoData	NoData	NoData	1.1	NoData	4.57	NoData	0.04	575.48	592.44	6.58	44.81	1515.35
2/14/2024 5:00	NoData	NoData	NoData	1.1	NoData	4.44	1.02	NoData	572.01	587.86	6.6	44.77	1485.85
2/14/2024 4:00	NoData	NoData	NoData	1.02	NoData	4.6	NoData	NoData	573.57	589.96	6.59	44.74	1450.8
2/14/2024 3:00	NoData	NoData	NoData	0.99	NoData	4.8	NoData	0.07	574.56	590.08	6.59	44.6	1457.55
2/14/2024 2:00	NoData	NoData	NoData	0.97	NoData	4.26	NoData	NoData	576.49	588.25	6.6	44.52	1486.43
2/14/2024 1:00	NoData	NoData	NoData	0.91	NoData	4.36	NoData	NoData	579.35	591.6	6.57	44.32	1468
2/14/2024 0:00	NoData	NoData	NoData	0.9	NoData	4.37	NoData	NoData	579.48	591.54	6.6	44.15	1468.28
2/13/2024 23:00	NoData	NoData	NoData	0.93	NoData	4.68	NoData	NoData	577.9	589.94	6.59	44.13	1498.43
2/13/2024 22:00	NoData	NoData	NoData	1	NoData	4.4	NoData	NoData	575.84	586.92	6.6	44.39	1498.07
2/13/2024 21:00	NoData	NoData	NoData	1.06	NoData	4.6	NoData	NoData	573.68	583.9	6.59	44.56	1478.22
2/13/2024 20:00	NoData	NoData	NoData	1.06	NoData	4.72	NoData	NoData	572.68	581.32	6.6	44.81	1437.48
2/13/2024 19:00	NoData	NoData	4.35	1.05	NoData	4.63	NoData	NoData	575.68	583.92	6.57	45.09	1439.15
2/13/2024 18:00	NoData	NoData	NoData	0.93	NoData	4.72	NoData	0.07	580.4	589.87	6.58	45.27	1463.54
2/13/2024 17:00	NoData	NoData	NoData	0.88	NoData	4.74	NoData	0.07	582.8	593.19	6.6	45.39	1465.9
2/13/2024 16:00	NoData	NoData	NoData	0.86	NoData	4	1.02	0.09	586.29	600.13	6.57	45.64	1469.63
2/13/2024 15:00	NoData	NoData	NoData	0.95	NoData	3.94	1.02	0.08	579.44	594.2	6.58	46.3	1434.11
2/13/2024 14:00	NoData	NoData	NoData	0.99	NoData	3.32	1.04	NoData	572.99	591.35	6.61	46.32	1409.35
2/13/2024 13:00	NoData	NoData	NoData	0.92	NoData	3.88	1.04	0.08	582.83	600.85	6.59	46.41	1405.11
2/13/2024 12:00	NoData	NoData	NoData	0.93	NoData	3.35	NoData	NoData	577.56	601.82	6.67	47.26	1355.6

Data Table 5_hourly

Timestamps	ro.a_rof_ait_1103.values screen	gac_pdit_41 03.outputs.v alue	gac_pdit_42 03.outputs.v alue	cl2_resid_ait .valuescree n	a_rof_ait_10 16a.outputs .value	a_rof_ait_10 16b.outputs .value	a_rof_ait_10 16c.outputs .value	a_rof_ait_10 15.outputs.v alue	ro.a_rof_ait_1102.values screen	ro.a_rof_ait_1109.values screen	ro.a_rof_ait_1104.values screen	ro.a_rof_ait_1107.values screen	ro.a_rof_ait_1105.values screen
2/13/2024 11:00	NoData	NoData	NoData	1.06	NoData	3.94	1.03	NoData	572.95	593.13	6.6	46.12	1445.95
2/13/2024 10:00	NoData	NoData	NoData	1.13	NoData	4.2	1.02	0.08	572.19	592.7	6.61	45.64	1483.65
2/13/2024 9:00	NoData	NoData	NoData	1.05	NoData	4.49	1.02	0.11	569.1	587.25	6.6	45.32	1432.32
2/13/2024 8:00	NoData	NoData	4.38	0.97	NoData	2.59	NoData	0.13	571.67	585.36	6.6	44.62	1431.41
2/13/2024 7:00	NoData	NoData	NoData	0.95	0	4.56	1.01	0.1	578.77	591.9	6.56	44.13	1465.08
2/13/2024 6:00	NoData	NoData	NoData	0.92	NoData	4.6	1.01	0.07	583.02	594.05	6.6	43.89	1504.62
2/13/2024 5:00	NoData	NoData	NoData	0.6	NoData	4.24	1.01	0.08	591.01	610.78	6.61	43.96	1502.89
2/13/2024 4:00	NoData	NoData	NoData	0.48	NoData	3.85	1.02	NoData	590.11	617.6	6.58	43.93	1513.37
2/13/2024 3:00	NoData	NoData	NoData	0.53	NoData	2.5	NoData	NoData	577.87	598.45	6.6	43.93	1489.66
2/13/2024 2:00	NoData	NoData	NoData	0.36	NoData	3.49	NoData	NoData	570.39	575.42	6.58	44.27	1431.53
2/13/2024 1:00	NoData	NoData	NoData	0.36	NoData	4.47	NoData	NoData	577.96	587.08	6.61	44.31	1454.77
2/13/2024 0:00	NoData	NoData	NoData	0.42	NoData	4.4	NoData	0.08	587.02	603.58	6.56	44.29	1498.72
2/12/2024 23:00	NoData	NoData	NoData	0.7	NoData	2.79	NoData	0.09	583.6	605.6	6.6	44.45	1488.38
2/12/2024 22:00	NoData	NoData	NoData	0.89	NoData	3.45	NoData	0.12	574.61	590.77	6.6	44.65	1449.54
2/12/2024 21:00	NoData	NoData	NoData	0.84	NoData	3.7	NoData	0.2	568.18	582.07	6.65	44.68	1432.75
2/12/2024 20:00	NoData	NoData	4.36	0.44	NoData	3.4	NoData	0.18	575.67	588.23	6.6	44.73	1439.72
2/12/2024 19:00	NoData	NoData	NoData	1.07	NoData	3.7	1.02	0.09	574.86	585.34	6.57	44.91	1483.44
2/12/2024 18:00	NoData	NoData	NoData	0.82	NoData	4.29	1.02	0.08	579.46	597.93	6.63	45.19	1478.63
2/12/2024 17:00	NoData	NoData	NoData	0.73	NoData	4.36	1.03	0.1	571.79	593.73	6.63	45.32	1449.66
2/12/2024 16:00	0.11	NoData	NoData	1.06	NoData	3.19	1.03	0.11	565.19	574.89	6.64	45.71	1433.5
2/12/2024 15:00	NoData	NoData	NoData	0.95	NoData	3.21	1.03	0.16	574.17	581.32	6.63	46.66	1407.84
2/12/2024 14:00	NoData	NoData	NoData	1.1	NoData	4.43	1.03	0.05	570.01	585.41	6.69	46.58	1480.1
2/12/2024 13:00	NoData	NoData	NoData	0.79	NoData	4.17	1.03	0.06	580.19	606.04	6.65	46.7	1358.77
2/12/2024 12:00	NoData	NoData	NoData	0.57	NoData	4.27	1.03	0.07	567.28	605.02	6.66	47.64	1306.31
2/12/2024 11:00	NoData	NoData	NoData	0.99	NoData	4.53	NoData	0.08	554.41	583.29	6.6	46.16	1309.61
2/12/2024 10:00	NoData	NoData	NoData	0.97	NoData	4.65	1.03	0.12	550.56	584.87	6.58	45.59	1295.72
2/12/2024 9:00	NoData	NoData	NoData	0.67	NoData	4.67	NoData	0.12	548.47	599.8	6.55	45.31	1314.19
2/12/2024 8:00	NoData	NoData	4.38	0.65	NoData	4.68	NoData	0.09	529.33	597.34	6.63	44.71	1253.84
2/12/2024 7:00	NoData	NoData	NoData	0.43	NoData	4.75	NoData	0.45	505.14	572.02	6.6	43.28	1282.83
2/12/2024 6:00	NoData	NoData	NoData	0	NoData	4.23	NoData	0.89	505.79	576.16	6.63	41.82	1248.1
2/12/2024 5:00	NoData	NoData	NoData	NoData	NoData	4.48	NoData	0.82	506.46	576.12	NoData	41.69	1197.7
2/12/2024 4:00	NoData	NoData	NoData	NoData	NoData	4.65	NoData	0.83	508.13	575.79	6.64	41.68	1195.78
2/12/2024 3:00	NoData	NoData	NoData	NoData	NoData	4.58	NoData	0.83	508.99	575.6	NoData	41.81	1190.7
2/12/2024 2:00	NoData	NoData	NoData	NoData	NoData	4.36	1.01	0.81	510.1	575.46	6.69	41.74	1188.01
2/12/2024 1:00	NoData	NoData	NoData	NoData	NoData	4.77	NoData	0.82	511.63	575.44	NoData	41.53	1188.1
2/12/2024 0:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.81	513.39	575.37	NoData	41.44	1188.4
2/11/2024 23:00	NoData	NoData	NoData	NoData	NoData	2.57	0.97	0.81	514.62	575.23	NoData	41.73	1181.93
2/11/2024 22:00	NoData	NoData	NoData	NoData	NoData	3.62	NoData	0.8	515.96	574.86	6.63	41.92	1174.33
2/11/2024 21:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.79	517.86	574.41	NoData	42.24	1168.38
2/11/2024 20:00	NoData	NoData	NoData	NoData	NoData	2.53	NoData	0.74	519.59	574	NoData	42.47	1163.52
2/11/2024 19:00	NoData	NoData	4.38	NoData	NoData	2.5	NoData	0.72	520.76	573.5	6.61	43.04	1153.03
2/11/2024 18:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.72	521.41	572.83	NoData	43.73	1138.72
2/11/2024 17:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.72	521.96	573.18	NoData	44.29	1129.75
2/11/2024 16:00	NoData	NoData	NoData	NoData	NoData	2.62	NoData	0.67	520.99	572.95	6.53	45.26	1122.71
2/11/2024 15:00	NoData	NoData	NoData	NoData	NoData	2.61	NoData	0.63	517.17	572.74	NoData	46.69	1045.65
2/11/2024 14:00	NoData	NoData	NoData	NoData	NoData	2.63	NoData	0.6	513.64	572.83	6.53	46.06	1137.85
2/11/2024 13:00	NoData	NoData	NoData	NoData	NoData	2.9	NoData	0.57	528.99	573	6.52	46.32	1104.09
2/11/2024 12:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.57	527.83	573.16	NoData	47.12	1059.49
2/11/2024 11:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.52	528.37	572.34	NoData	45.84	1182.99
2/11/2024 10:00	NoData	NoData	NoData	NoData	NoData	NoData	1.01	0.49	530.97	570.48	NoData	44.91	1235.17
2/11/2024 9:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.49	533.48	571.38	6.51	43.99	1245.36

Data Table 5_hourly

Timestamps	ro.a_rof_ait_1103.values screen	gac_pdit_4103.outputs.v alue	gac_pdit_4203.outputs.v alue	cl2_resid_ait .valuescree n	a_rof_ait_1016a.outputs .value	a_rof_ait_1016b.outputs .value	a_rof_ait_1016c.outputs .value	a_rof_ait_1015.outputs.v alue	ro.a_rof_ait_1102.values screen	ro.a_rof_ait_1109.values screen	ro.a_rof_ait_1104.values screen	ro.a_rof_ait_1107.values screen	ro.a_rof_ait_1105.values screen
2/11/2024 8:00	NoData	NoData	4.43	NoData	NoData	2.5	NoData	0.5	536.02	572.35	NoData	43.03	1266.02
2/11/2024 7:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.49	539.12	572.18	6.49	42.47	1284.05
2/11/2024 6:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.49	540.65	571.88	NoData	42.57	1283.16
2/11/2024 5:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.49	541.54	571.85	NoData	42.74	1279.85
2/11/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.48	542.54	571.7	NoData	42.89	1278.04
2/11/2024 3:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.46	543.36	571.55	NoData	42.96	1268.59
2/11/2024 2:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.43	543.99	571.48	6.52	43.17	1269.22
2/11/2024 1:00	NoData	NoData	NoData	NoData	NoData	2.5	NoData	0.38	544.34	571.36	NoData	43.33	1274.1
2/11/2024 0:00	NoData	NoData	NoData	NoData	NoData	2.6	NoData	0.34	545.25	571.05	NoData	43.47	1284.26
2/10/2024 23:00	NoData	NoData	4.46	1.47	NoData	2.5	NoData	0.3	546.24	570.7	6.58	43.79	1293.37
2/10/2024 22:00	NoData	NoData	NoData	1	NoData	2.5	NoData	0.27	546.94	570.52	NoData	44.09	1291.56

SA and AS_hourly

Timestamps	arcadia.hso4.a_hso4_pump1.vfdspeed	arcadia.hso4.a_hso4_pump2.vfdspeed	arcadia.antisalant.pump1.vfdspeed	arcadia.antisalant.pump2.vfdspeed	arcadia.hso4.a_hso4_fit_1004.value	arcadia.hso4.a_hso4_fit_2004.value	arcadia.hso4.a_hso4_fit_3004.value	arcadia.hso4.a_hso4_fit_4004.value	arcadia.hso4.a_hso4_fit_5004.value	a_tank_hso4_1.v_ai.outputs.value	a_tank_hso4_2.v_ai.outputs.value	antisalant.new).a_as_fit_1004.value	a_as_tnk_1101.v_ai.outputs.value
2/19/2024 20:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/19/2024 19:00	29.28	NoData	14.74	NoData	5.83	NoData	NoData	NoData	NoData	NoData	NoData	0.42	NoData
2/19/2024 18:00	29.66	NoData	19.9	NoData	7.17	NoData	NoData	NoData	NoData	NoData	NoData	0.58	NoData
2/19/2024 17:00	32.24	NoData	28.34	NoData	11.48	NoData	NoData	NoData	NoData	NoData	NoData	0.85	NoData
2/19/2024 16:00	33.74	NoData	29.67	NoData	12.37	NoData	NoData	NoData	NoData	NoData	NoData	0.91	NoData
2/19/2024 15:00	32.74	NoData	20.29	NoData	8.48	NoData	NoData	NoData	NoData	NoData	NoData	0.67	NoData
2/19/2024 14:00	31.92	NoData	15	0.5	6.24	NoData	NoData	NoData	NoData	NoData	NoData	0.4	NoData
2/19/2024 13:00	26.6	NoData	27.71	NoData	7.8	NoData	NoData	NoData	NoData	NoData	NoData	0.67	6.46
2/19/2024 12:00	30.7	NoData	43.43	NoData	16.9	NoData	NoData	NoData	NoData	NoData	NoData	1.36	NoData
2/19/2024 11:00	27.33	NoData	31.06	NoData	11.77	NoData	NoData	NoData	NoData	NoData	NoData	1.02	6.33
2/19/2024 10:00	27.47	NoData	24.49	NoData	8.62	NoData	NoData	NoData	NoData	NoData	NoData	0.79	NoData
2/19/2024 9:00	27.16	NoData	18.82	NoData	6	NoData	NoData	NoData	NoData	NoData	NoData	0.57	6.27
2/19/2024 8:00	32.91	NoData	15.34	NoData	5.63	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.26
2/19/2024 7:00	28.62	NoData	15.49	NoData	4.88	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.36
2/19/2024 6:00	29.53	NoData	15.41	NoData	5.06	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.3
2/19/2024 5:00	28.7	NoData	15.36	NoData	4.92	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/19/2024 4:00	28.99	NoData	15.34	NoData	4.97	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/19/2024 3:00	29.04	NoData	15.36	NoData	4.97	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.4
2/19/2024 2:00	29.3	NoData	15.37	NoData	4.98	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/19/2024 1:00	29.2	NoData	15.24	NoData	5.08	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/19/2024 0:00	28.06	NoData	15.28	NoData	5.12	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.26
2/18/2024 23:00	27.35	NoData	15.33	NoData	5.07	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/18/2024 22:00	26.7	NoData	15.4	NoData	5.09	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/18/2024 21:00	26.3	NoData	15.39	NoData	5.01	NoData	NoData	NoData	NoData	NoData	NoData	0.46	6.27
2/18/2024 20:00	26.82	NoData	15.49	NoData	5.17	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/18/2024 19:00	26.08	NoData	15.41	NoData	5.06	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/18/2024 18:00	24.99	NoData	15.36	NoData	4.96	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/18/2024 17:00	24.68	NoData	15.41	NoData	4.77	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/18/2024 16:00	23.8	NoData	15.42	NoData	4.7	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/18/2024 15:00	22.87	NoData	15.23	NoData	4.35	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/18/2024 14:00	21.64	NoData	15.5	NoData	4.28	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/18/2024 13:00	22.63	NoData	15.48	NoData	4.07	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.28
2/18/2024 12:00	25.29	NoData	15.38	NoData	4.37	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.26
2/18/2024 11:00	27.22	NoData	15.38	NoData	4.67	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/18/2024 10:00	27.02	NoData	15.39	NoData	4.69	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.27
2/18/2024 9:00	27.82	NoData	15.44	NoData	4.74	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.28
2/18/2024 8:00	26.93	NoData	15.35	NoData	4.69	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.28
2/18/2024 7:00	25.38	NoData	15.49	NoData	4.6	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/18/2024 6:00	24.74	NoData	12.74	NoData	4.11	NoData	NoData	NoData	NoData	NoData	NoData	0.41	NoData
2/18/2024 5:00	25.78	NoData	14.83	NoData	4.85	NoData	NoData	NoData	NoData	NoData	NoData	0.41	6.27
2/18/2024 4:00	25.47	NoData	15.34	NoData	4.85	NoData	-0.01	NoData	NoData	NoData	NoData	0.44	NoData
2/18/2024 3:00	25	NoData	15.38	NoData	4.83	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/18/2024 2:00	24.55	NoData	15.33	NoData	4.76	NoData	NoData	NoData	NoData	NoData	NoData	0.44	6.27
2/18/2024 1:00	23.94	NoData	15.22	NoData	4.66	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/18/2024 0:00	24.09	NoData	15.38	NoData	4.77	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.32
2/17/2024 23:00	24.02	NoData	15.35	NoData	4.77	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/17/2024 22:00	24.59	NoData	15.46	NoData	4.95	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/17/2024 21:00	24.52	NoData	15.38	NoData	4.89	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/17/2024 20:00	24.02	NoData	15.37	NoData	4.86	NoData	NoData	NoData	NoData	NoData	NoData	0.44	6.34

SA and AS_hourly

Timestamps	arcadia.hso4.a_hso4_pump1.vfdspeed	arcadia.hso4.a_hso4_pump2.vfdspeed	arcadia.antisalant.a_anmp1.vfdspeed	arcadia.antisalant.a_anmp2.vfdspeed	arcadia.hso4.a_hso4_fit_1004.value	arcadia.hso4.a_hso4_fit_2004.value	arcadia.hso4.a_hso4_fit_3004.value	arcadia.hso4.a_hso4_fit_4004.value	arcadia.hso4.a_hso4_fit_5004.value	a_tank_hso4_1.v_ai.outputs.value	a_tank_hso4_2.v_ai.outputs.value	antisalant{new}.a_as_fit_1004.value	a_as_tnk_1101.v_ai.outputs.value
2/17/2024 19:00	24.52	NoData	15.37	NoData	4.97	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/17/2024 18:00	24.79	NoData	15.3	NoData	5.01	NoData	NoData	NoData	NoData	NoData	NoData	0.44	6.3
2/17/2024 17:00	25.4	NoData	15.29	NoData	5.17	NoData	NoData	NoData	NoData	NoData	NoData	0.44	6.25
2/17/2024 16:00	25.25	NoData	15.18	NoData	5.03	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.25
2/17/2024 15:00	26.11	NoData	22.37	NoData	7.73	NoData	NoData	NoData	NoData	NoData	NoData	0.71	NoData
2/17/2024 14:00	26.37	NoData	28.58	NoData	9.7	NoData	NoData	NoData	NoData	NoData	NoData	0.84	NoData
2/17/2024 13:00	24.27	NoData	17.47	NoData	5.65	NoData	NoData	NoData	NoData	NoData	NoData	0.53	NoData
2/17/2024 12:00	25.54	NoData	27.19	NoData	8.66	NoData	NoData	NoData	NoData	NoData	NoData	0.75	NoData
2/17/2024 11:00	26.64	NoData	29.72	NoData	9.91	NoData	NoData	NoData	NoData	NoData	NoData	0.91	NoData
2/17/2024 10:00	23.81	NoData	24.04	NoData	7.19	NoData	NoData	NoData	NoData	NoData	NoData	0.74	NoData
2/17/2024 9:00	22.98	NoData	15.26	NoData	4.65	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/17/2024 8:00	24.3	NoData	11.17	NoData	4.63	NoData	NoData	NoData	NoData	NoData	NoData	0.31	NoData
2/17/2024 7:00	23.53	NoData	15.34	NoData	4.76	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/17/2024 6:00	23.7	NoData	15.38	NoData	4.74	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/17/2024 5:00	23.63	NoData	15.37	NoData	4.9	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/17/2024 4:00	23.57	NoData	15.4	NoData	4.74	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/17/2024 3:00	23.72	NoData	15.38	NoData	4.8	NoData	NoData	NoData	NoData	NoData	NoData	0.44	6.25
2/17/2024 2:00	23.73	NoData	15.33	NoData	4.85	NoData	NoData	NoData	NoData	NoData	NoData	0.45	6.36
2/17/2024 1:00	24.07	NoData	15.46	NoData	4.85	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/17/2024 0:00	24.3	NoData	15.44	NoData	4.9	NoData	NoData	NoData	NoData	NoData	NoData	0.46	6.25
2/16/2024 23:00	23.7	NoData	15.39	NoData	4.93	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/16/2024 22:00	24.21	NoData	15.41	NoData	5.15	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/16/2024 21:00	25.13	NoData	15.32	NoData	5.01	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/16/2024 20:00	25.44	NoData	15.34	NoData	5.15	NoData	NoData	NoData	NoData	NoData	NoData	0.44	NoData
2/16/2024 19:00	26.56	NoData	21.9	NoData	7.27	NoData	NoData	NoData	NoData	NoData	NoData	0.59	NoData
2/16/2024 18:00	28.94	NoData	25.62	NoData	9.57	NoData	NoData	NoData	NoData	NoData	NoData	0.79	6.3
2/16/2024 17:00	26.7	NoData	15.68	NoData	5.52	NoData	NoData	NoData	NoData	NoData	NoData	0.43	6.25
2/16/2024 16:00	28.48	NoData	28.1	NoData	10.24	NoData	NoData	NoData	NoData	NoData	NoData	0.77	NoData
2/16/2024 15:00	29.21	NoData	29.61	NoData	10.9	NoData	NoData	NoData	NoData	NoData	NoData	0.92	NoData
2/16/2024 14:00	29.02	NoData	29.67	NoData	10.71	NoData	NoData	NoData	NoData	NoData	NoData	0.92	6.25
2/16/2024 13:00	28.55	NoData	30.07	NoData	10.6	NoData	NoData	NoData	NoData	NoData	NoData	0.94	6.25
2/16/2024 12:00	28.44	NoData	29.87	NoData	10.26	NoData	NoData	NoData	NoData	NoData	NoData	0.92	6.25
2/16/2024 11:00	30.17	NoData	29.63	NoData	11.04	NoData	NoData	NoData	NoData	NoData	NoData	0.94	6.31
2/16/2024 10:00	31.3	NoData	29.74	NoData	11.54	NoData	NoData	NoData	NoData	NoData	NoData	0.93	6.3
2/16/2024 9:00	28.12	NoData	29.9	NoData	10.43	NoData	NoData	NoData	NoData	NoData	NoData	0.93	6.38
2/16/2024 8:00	26.33	NoData	25.61	NoData	7.33	NoData	NoData	NoData	NoData	NoData	NoData	0.67	NoData
2/16/2024 7:00	70.3	NoData	14.67	NoData	5.16	NoData	NoData	NoData	NoData	NoData	NoData	0.42	NoData
2/16/2024 6:00	79.17	NoData	15.41	NoData	4.73	NoData	NoData	NoData	NoData	NoData	NoData	0.45	NoData
2/16/2024 5:00	80.71	NoData	22	NoData	4.71	NoData	NoData	NoData	NoData	NoData	NoData	0.62	6.27
2/16/2024 4:00	81	NoData	29.82	NoData	7.93	NoData	NoData	NoData	NoData	NoData	NoData	0.9	6.26
2/16/2024 3:00	80.98	NoData	29.88	NoData	8.08	NoData	NoData	NoData	NoData	NoData	NoData	0.91	6.27
2/16/2024 2:00	81.31	NoData	29.91	NoData	8.11	NoData	NoData	NoData	NoData	NoData	NoData	0.9	6.26
2/16/2024 1:00	81.7	NoData	29.91	NoData	7.97	NoData	NoData	NoData	NoData	NoData	NoData	0.92	6.27
2/16/2024 0:00	81	NoData	29.94	NoData	7.98	NoData	NoData	NoData	NoData	NoData	NoData	0.91	6.31
2/15/2024 23:00	80.98	NoData	29.74	NoData	8.22	NoData	NoData	NoData	NoData	NoData	NoData	0.9	NoData
2/15/2024 22:00	72.6	NoData	29.96	NoData	9.57	NoData	NoData	NoData	NoData	NoData	NoData	0.92	NoData
2/15/2024 21:00	55.48	NoData	29.99	NoData	10.83	NoData	NoData	NoData	NoData	NoData	NoData	0.91	NoData
2/15/2024 20:00	49.94	NoData	30.12	NoData	10.46	NoData	NoData	NoData	NoData	NoData	NoData	0.92	NoData
2/15/2024 19:00	42.42	NoData	29.85	NoData	9.92	NoData	NoData	NoData	NoData	NoData	NoData	0.91	6.26

SA and AS_hourly

Timestamps	arcadia.hso4.a_hso4_pump1.vfdspeed	arcadia.hso4.a_hso4_pump2.vfdspeed	arcadia.antisalant.pump1.vfdspeed	arcadia.antisalant.pump2.vfdspeed	arcadia.hso4.a_hso4_fit_1004.value	arcadia.hso4.a_hso4_fit_2004.value	arcadia.hso4.a_hso4_fit_3004.value	arcadia.hso4.a_hso4_fit_4004.value	arcadia.hso4.a_hso4_fit_5004.value	a_tank_hso4_1.v_ai.outputs.value	a_tank_hso4_2.v_ai.outputs.value	antisalant.new).a_as_fit_1004.value	a_as_tnk_1101.v_ai.outputs.value
2/15/2024 18:00	38.17	NoData	29.84	NoData	9.2	NoData	NoData	NoData	NoData	NoData	NoData	0.91	NoData
2/15/2024 17:00	36.96	NoData	20.57	NoData	6.54	NoData	NoData	NoData	NoData	NoData	NoData	0.62	NoData
2/15/2024 16:00	22.75	NoData	6.5	NoData	4.52	NoData	NoData	NoData	NoData	NoData	NoData	0.25	NoData
2/15/2024 15:00	28.89	NoData	29.03	NoData	10.71	NoData	NoData	NoData	NoData	NoData	NoData	0.78	6.25
2/15/2024 14:00	29.99	NoData	29.78	NoData	11.09	NoData	NoData	NoData	NoData	NoData	NoData	0.92	6.25
2/15/2024 13:00	26.98	NoData	22.74	NoData	8.63	NoData	NoData	NoData	NoData	NoData	NoData	0.78	6.29
2/15/2024 12:00	26.26	NoData	43.91	NoData	17.44	NoData	NoData	NoData	NoData	NoData	NoData	1.36	NoData
2/15/2024 11:00	25.8	NoData	42.99	NoData	15.89	NoData	NoData	NoData	NoData	NoData	NoData	1.3	6.27
2/15/2024 10:00	24.75	NoData	44.82	NoData	16.65	NoData	NoData	NoData	NoData	NoData	NoData	1.42	NoData
2/15/2024 9:00	25.03	NoData	30.21	NoData	9.09	NoData	NoData	NoData	NoData	NoData	NoData	0.91	6.27
2/15/2024 8:00	80.04	NoData	18.62	NoData	4.31	NoData	NoData	NoData	NoData	NoData	NoData	0.58	NoData
2/15/2024 7:00	75.16	NoData	30.1	NoData	9.75	NoData	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/15/2024 6:00	81.27	NoData	29.94	NoData	11.1	NoData	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/15/2024 5:00	80.12	NoData	29.83	NoData	8.95	NoData	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/15/2024 4:00	81.01	NoData	29.88	NoData	8.52	NoData	NoData	NoData	NoData	NoData	NoData	0.92	NoData
2/15/2024 3:00	80.98	NoData	30.02	NoData	8.5	NoData	NoData	NoData	NoData	NoData	NoData	0.92	NoData
2/15/2024 2:00	80.94	NoData	29.61	NoData	8.42	NoData	NoData	NoData	NoData	NoData	NoData	0.91	NoData
2/15/2024 1:00	81.06	NoData	29.88	NoData	8.39	NoData	NoData	NoData	NoData	NoData	NoData	0.91	6.25
2/15/2024 0:00	79.89	NoData	28.32	NoData	8.92	NoData	NoData	NoData	NoData	NoData	NoData	0.81	NoData
2/14/2024 23:00	82.29	NoData	26.52	NoData	7.44	NoData	NoData	NoData	NoData	NoData	NoData	0.72	6.26
2/14/2024 22:00	79.84	NoData	29.91	NoData	9.14	NoData	NoData	NoData	NoData	NoData	NoData	0.92	6.32
2/14/2024 21:00	80.65	NoData	29.92	NoData	10.45	NoData	NoData	NoData	NoData	NoData	NoData	0.93	6.31
2/14/2024 20:00	78.63	NoData	29.67	NoData	10.76	NoData	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/14/2024 19:00	76.91	NoData	29.8	NoData	12.98	NoData	NoData	NoData	NoData	NoData	NoData	0.91	6.26
2/14/2024 18:00	50.15	NoData	23.62	NoData	8.28	-0.01	NoData	NoData	NoData	NoData	NoData	0.62	NoData
2/14/2024 17:00	59.86	NoData	28.61	NoData	14.4	0.03	NoData	NoData	NoData	NoData	NoData	0.74	NoData
2/14/2024 16:00	47.6	0.1	17.54	NoData	7.89	0.33	NoData	NoData	NoData	NoData	NoData	0.5	NoData
2/14/2024 15:00	54.19	NoData	18.57	NoData	7.55	0.14	NoData	NoData	NoData	NoData	NoData	0.5	6.28
2/14/2024 14:00	57.17	NoData	29.31	NoData	11.38	0.32	NoData	NoData	NoData	NoData	NoData	0.74	6.25
2/14/2024 13:00	46.94	NoData	23.26	NoData	9.93	0.32	NoData	NoData	NoData	NoData	NoData	0.72	6.34
2/14/2024 12:00	52.79	NoData	33.62	NoData	6.23	0.19	NoData	NoData	NoData	NoData	NoData	0.85	NoData
2/14/2024 11:00	40.3	NoData	26.64	NoData	8.19	0.23	NoData	NoData	NoData	NoData	NoData	0.72	NoData
2/14/2024 10:00	47.67	NoData	28.14	NoData	9.17	0.29	NoData	NoData	NoData	NoData	NoData	0.84	NoData
2/14/2024 9:00	39.85	NoData	19.51	NoData	6.99	0.23	NoData	NoData	NoData	NoData	NoData	0.55	6.27
2/14/2024 8:00	43.82	NoData	22.22	NoData	7.71	0.24	NoData	NoData	NoData	NoData	NoData	0.72	6.28
2/14/2024 7:00	75.57	NoData	34.01	NoData	13.19	0.32	NoData	NoData	NoData	NoData	NoData	1.18	NoData
2/14/2024 6:00	68.85	NoData	29.86	NoData	13.4	0.34	NoData	NoData	NoData	NoData	NoData	0.92	6.35
2/14/2024 5:00	67.15	NoData	29.65	NoData	13.12	0.33	NoData	NoData	NoData	NoData	NoData	0.91	NoData
2/14/2024 4:00	67.7	NoData	29.7	NoData	13.04	0.31	NoData	NoData	NoData	NoData	NoData	0.92	6.37
2/14/2024 3:00	66.55	NoData	29.86	NoData	12.99	0.35	NoData	NoData	NoData	NoData	NoData	0.91	6.28
2/14/2024 2:00	66.44	NoData	30.04	NoData	13.61	0.37	NoData	NoData	NoData	NoData	NoData	0.93	6.25
2/14/2024 1:00	65.39	NoData	29.77	NoData	13.1	0.35	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/14/2024 0:00	65.19	NoData	29.79	NoData	12.94	0.38	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 23:00	65.74	NoData	29.94	NoData	12.91	0.31	NoData	NoData	NoData	NoData	NoData	0.94	6.33
2/13/2024 22:00	64.41	NoData	29.78	NoData	12.91	0.35	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 21:00	63.35	NoData	29.83	NoData	13.09	0.37	NoData	NoData	NoData	NoData	NoData	0.92	6.26
2/13/2024 20:00	61.83	NoData	29.83	NoData	13.41	0.37	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 19:00	66.08	NoData	29.66	NoData	13.1	0.33	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 18:00	64.98	NoData	29.54	NoData	13.16	0.37	NoData	NoData	NoData	NoData	NoData	0.93	6.31

SA and AS_hourly

Timestamps	arcadia.hso4_a_hso4_pumped	arcadia.hso4_a_hso4_pumped	arcadia.antisalant_pump1.value	arcadia.antisalant_pump2.value	arcadia.hso4_fit_1004.value	arcadia.hso4_fit_2004.value	arcadia.hso4_fit_3004.value	arcadia.hso4_fit_4004.value	arcadia.hso4_fit_5004.value	a_tank_hso4_1.v_ai.outputs.value	a_tank_hso4_2.v_ai.outputs.value	antisalant{new}.a_as_fit_1004.value	a_as_tnk_11_01.v_ai.outputs.value
2/13/2024 17:00	66.34	NoData	29.63	NoData	13.25	0.34	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 16:00	66.21	NoData	29.88	NoData	13.36	0.38	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 15:00	76.44	NoData	29.76	NoData	13.48	0.36	NoData	NoData	NoData	NoData	NoData	0.92	NoData
2/13/2024 14:00	70.41	NoData	29.71	NoData	12.64	0.34	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 13:00	78.68	NoData	29.63	NoData	12.68	0.33	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 12:00	77.74	NoData	29.77	NoData	13.12	0.32	NoData	NoData	NoData	NoData	NoData	0.94	NoData
2/13/2024 11:00	73.88	NoData	29.58	NoData	12.98	0.37	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 10:00	69.16	NoData	30	NoData	13.35	0.35	NoData	NoData	NoData	NoData	NoData	0.93	6.26
2/13/2024 9:00	61.86	NoData	29.92	NoData	12.73	0.34	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 8:00	49.08	NoData	19.46	NoData	8.33	0.21	NoData	NoData	NoData	NoData	NoData	0.62	NoData
2/13/2024 7:00	45.17	NoData	19.41	NoData	8.02	0.24	NoData	NoData	NoData	NoData	NoData	0.54	6.26
2/13/2024 6:00	62.06	NoData	29.71	NoData	13.11	0.37	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 5:00	63.39	NoData	29.88	NoData	13.39	0.36	NoData	NoData	NoData	NoData	NoData	0.93	6.29
2/13/2024 4:00	63.29	NoData	29.85	NoData	12.99	0.35	NoData	NoData	NoData	NoData	NoData	0.93	6.32
2/13/2024 3:00	64.52	NoData	29.71	NoData	12.96	0.34	NoData	NoData	NoData	NoData	NoData	0.92	NoData
2/13/2024 2:00	64.86	NoData	29.83	NoData	12.86	0.35	NoData	NoData	NoData	NoData	NoData	0.91	6.26
2/13/2024 1:00	65.22	NoData	29.86	NoData	13.08	0.38	NoData	NoData	NoData	NoData	NoData	0.93	NoData
2/13/2024 0:00	65.73	NoData	29.95	NoData	13.35	0.36	NoData	NoData	NoData	NoData	NoData	0.92	6.3
2/12/2024 23:00	66.79	NoData	29.93	NoData	13.01	0.34	-0.01	NoData	NoData	NoData	NoData	0.93	6.33
2/12/2024 22:00	68.21	NoData	29.67	NoData	12.97	0.32	NoData	NoData	NoData	NoData	NoData	0.91	NoData
2/12/2024 21:00	62.37	NoData	27.97	NoData	11.96	0.3	NoData	NoData	NoData	NoData	NoData	0.88	NoData
2/12/2024 20:00	37.09	NoData	15.25	NoData	6.24	0.26	NoData	NoData	NoData	NoData	NoData	0.37	6.26
2/12/2024 19:00	70.96	NoData	27.16	NoData	12.33	0.36	NoData	NoData	NoData	NoData	NoData	0.85	6.3
2/12/2024 18:00	74.51	NoData	29.8	NoData	12.97	0.31	NoData	NoData	NoData	NoData	NoData	0.91	NoData
2/12/2024 17:00	73.13	NoData	29.53	NoData	13.04	0.33	NoData	NoData	NoData	NoData	NoData	0.9	6.31
2/12/2024 16:00	55.55	NoData	24.04	NoData	10.24	0.32	NoData	NoData	NoData	NoData	NoData	0.71	NoData
2/12/2024 15:00	61.48	0.38	27.11	NoData	9.33	0.28	NoData	NoData	NoData	NoData	NoData	0.63	6.35
2/12/2024 14:00	80.27	NoData	29.52	NoData	12.97	0.34	NoData	NoData	NoData	NoData	NoData	0.92	6.28
2/12/2024 13:00	79.71	NoData	29.87	NoData	12.87	0.34	NoData	NoData	NoData	NoData	NoData	0.94	NoData
2/12/2024 12:00	77.44	NoData	29.9	NoData	13.25	0.35	NoData	NoData	NoData	NoData	NoData	0.93	6.26
2/12/2024 11:00	62.96	NoData	29.85	NoData	12.35	0.33	NoData	NoData	NoData	NoData	NoData	0.95	NoData
2/12/2024 10:00	56.43	NoData	29.75	NoData	11.8	0.33	NoData	NoData	NoData	NoData	NoData	0.94	NoData
2/12/2024 9:00	49.87	NoData	17.7	NoData	7.55	0.23	NoData	NoData	NoData	NoData	NoData	0.57	NoData
2/12/2024 8:00	64.32	NoData	29.58	NoData	12.6	0.37	NoData	NoData	NoData	NoData	NoData	0.91	6.28
2/12/2024 7:00	43.7	NoData	24.06	NoData	9.16	0.33	NoData	NoData	NoData	NoData	NoData	0.73	NoData
2/12/2024 6:00	23.51	NoData	13	NoData	4.11	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 5:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.3
2/12/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 3:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 2:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/12/2024 1:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.35
2/12/2024 0:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.26
2/11/2024 23:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.26
2/11/2024 22:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.27
2/11/2024 21:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.32
2/11/2024 20:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 19:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 18:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.26
2/11/2024 17:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

SA and AS_hourly

Timestamps	arcadia.hso4.a_hso4_pump1.vfdspeed	arcadia.hso4.a_hso4_pump2.vfdspeed	arcadia.antisalant.pump1.vfdspeed	arcadia.antisalant.pump2.vfdspeed	arcadia.hso4.a_hso4_fit_1004.value	arcadia.hso4.a_hso4_fit_2004.value	arcadia.hso4.a_hso4_fit_3004.value	arcadia.hso4.a_hso4_fit_4004.value	arcadia.hso4.a_hso4_fit_5004.value	a_tank_hso4_1.v_ai.outputs.value	a_tank_hso4_2.v_ai.outputs.value	antisalant.new).a_as_fit_1004.value	a_as_tnk_1101.v_ai.outputs.value
2/11/2024 16:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.31
2/11/2024 15:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 14:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 13:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 12:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.4
2/11/2024 11:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.32
2/11/2024 10:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 9:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.31
2/11/2024 8:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.35
2/11/2024 7:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.35
2/11/2024 6:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 5:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 4:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 3:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 2:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 1:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/11/2024 0:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.35
2/10/2024 23:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2/10/2024 22:00	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	6.28

This page intentionally left blank.



Appendix F: Instrument Calibrations





10623 Fulton Wells Avenue, Santa Fe Springs, CA 90670
 P: 562-946-0700 F: 562-946-0701
 csielectric.com

SUBMITTAL

<p>Project: <u>Arcadia WTP Expansion</u></p> <p>Project Number: <u>211053.10</u></p> <p>Project Manager: <u>John Hogan</u></p> <p>E-mail: <u>john.hogan@csielectric.com</u> <u>dexter.cudal@csielectric.com</u></p>	<p>To: <u>Walsh Construction Company</u></p> <p>Address: <u>9915 Mira Mesa Blvd., Ste #230</u> <u>San Diego, CA 92131</u></p>
<p>CSI Submittal #: <u>98</u></p> <p>Specification Section: <u>40 61 13-H</u></p>	<p>Attn: <u>Octavio Ramos</u></p> <p>cc: <u>sdjameson@walshgroup.com</u></p>
<p>Description: <u>Transmitter Calibration Test Data</u></p>	
<p>Date Sent: <u>12/19/23</u> Due: <u>12/26/23</u></p> <p>Date Received: _____</p> <p>GC Submittal #: _____</p> <p>Submittal Status: _____</p>	<p>cc: <u>rpadilla@walshgroup.com</u></p> <p>cc: <u>brian.basler@csielectric.com</u></p> <p>cc: <u>andrew.zaragoza@csielectric.com</u></p>

Submittal Notes

Item #	Description	Notes/Comments	Item Status
1	page 1 - Transmittal		
2	page 2 - Cover		
3	page 3 - 40 61 13-H. Transmitter Calibration Test Data		

Item #	Review Comment	Response to Comment
--------	----------------	---------------------




211053.10

**40 61 13-H. Transmitter Calibration
Test Data**

**Olympic Well Field Restoration and
Arcadia WTP Expansion**

**Headquarters
10623 Fulton Wells Avenue
Santa Fe Springs, CA 90670
(562) 946-0700 csielectric.com**

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 10/16/2023	Tag No GAC-FIT-4020
	Manufacturer E+H	Model # 5W4C2H-AAELHP2DHA1SGA+AAAC817Z1	Serial # V33AA619000	Process GAC TRAIN 4 RO FEED SUPPLY
Engineering Units GPM	Range 0 1500			

Installation verified by: G.A.

Safety precautions verified by: RL

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 GPM	3.998 mA	0 GPM
25%	8 mA	375 GPM	7.999 mA	375.03 GPM
50%	12 mA	750 GPM	12.000 mA	750.11 GPM
75%	16 mA	1125 GPM	16.001 mA	1125.28 GPM
100%	20 mA	1500 GPM	20.002 mA	1500.43 GPM

Calibrated by: Shank Osh
Date: 12/15/23

Owner's Representative: [Signature]
Date: 12/15/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 10/6/2023	Tag No GAC-FIT-3020
Manufacturer E+H	Model # SW4C2H-AAELHP2DHA1SGA-AAACB17Z1	Serial # V33AA719000	Process GAC TRAIN 3 RO FEED SUPPLY	
Engineering Units GPM	Range 0	1500		


Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 GPM	3.997 mA	0 GPM
25%	8 mA	375 GPM	7.997 mA	374.84 GPM
50%	12 mA	750 GPM	11.997 mA	749.94 GPM
75%	16 mA	1125 GPM	15.997 mA	1125.06 GPM
100%	20 mA	1500 GPM	19.997 mA	1500.15 GPM

Calibrated by: Raymond Ochoa Owner's Representative: [Signature]
 Date: 12/5/23 Date: 12/5/23

Instrument Calibration Sheet (Analog)			
	Job #/Location	Customer	Tag No
	Arcadia WTP Manufacturer E+H Engineering Units GPM	City of Santa Monica Model # 5W4C2H-AAELHP2DHA15GA+AACB17Z1 Range 0 1500	10/6/2023 Serial # T81A4D19000

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP


Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 GPM	3.999 mA	0 GPM
25%	8 mA	375 GPM	7.999 mA	374.92 GPM
50%	12 mA	750 GPM	11.999 mA	749.94 GPM
75%	16 mA	1125 GPM	15.999 mA	1124.89 GPM
100%	20 mA	1500 GPM	19.999 mA	1499.89 GPM

Calibrated by: David Adams
Date: 10/5/23

Owner's Representative: [Signature]
Date: 10/5/23

Instrument Calibration Sheet (Analog)			
	Job #/Location	Customer	Date
	Arcadia WTP	City of Santa Monica	10/6/2023
Manufacturer	Model #	Serial #	Tag No
E+H	5W4C2H-AAELHP2DHA1SGA+AACB17Z1	T81A4C19000	GAC-FIT-1020
Engineering Units	Range		Process
GPM	0 1500		GAC TRAIN 1 RO FEED SUPPLY

Installation verified by: G. A. Termination verified by: G. A. Safety precautions verified by: R.P.

Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
MFR:		MODEL:	
		SER #:	5507006
		SER #:	
		CAL DATE:	7/10/2023
		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 GPM	3.997 mA	0 GPM
25%	8 mA	375 GPM	7.998 mA	374.88 GPM
50%	12 mA	750 GPM	11.998 mA	749.98 GPM
75%	16 mA	1125 GPM	15.998 mA	1125.03 GPM
100%	20 mA	1500 GPM	19.998 mA	1500.09 GPM

Calibrated by: [Signature]
Date: 12/15/23

Owner's Representative: [Signature]
Date: 12/15/23

Instrument Calibration Sheet (Analog)			
	Job #/Location	Customer	Tag No
	Arcadia WTP	City of Santa Monica	ROR-PIT-1020
	Manufacturer	Model #	Process
	Rosemount	3051CG4A22A1AM5DF	Brine
Engineering Units	Range	Serial #	
psi	0 - 200	223HP60340185	

Installation verified by: [Signature] Termination verified by: [Signature] Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: Fluke	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/23
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA	4.007 mA	0 PSI
25%	8 mA	8 mA	7.95 mA	49.24 PSI
50%	12 mA	12 mA	12.005 mA	99.99 PSI
75%	16 mA	16 mA	16.0002 mA	149.97 PSI
100%	20 mA	20 mA	20.003 mA	199.98 PSI

Calibrated by: [Signature] Owner's Representative: Tom P. Dillk
 Date: 8/15/23 Date: 8/15/23

Instrument Calibration Sheet (Analog)			
	Job #/Location	Customer	Date
	Arcadia WTP	City of Santa Monica	8/17/2023
Manufacturer	Model #	Serial #	Tag No
Siemens	7ML5034-4BA01-2-Y15	P8D-P8112053	ROR-LIT-1002
Engineering Units	Range		Process
ft	0 12		Brine Tank Level B

Installation verified by: R. P. [Signature] Termination verified by: R. P. [Signature] Safety precautions verified by: R. P. [Signature]

Test Equipment Used:	
MFR: <u>Fluke</u>	MODEL: <u>789</u> SER #: <u>5507006</u> CAL DATE: <u>7/10/23</u>
MFR:	MODEL: SER #: CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA	4.01 mA	0.11
25%	8 mA	8 mA	8.00 mA	2.99
50%	12 mA	12 mA	12.01 mA	5.11
75%	16 mA	16 mA	15.99 mA	8.99
100%	20 mA	20 mA	19.99 mA	11.99

Calibrated by: [Signature] Owner's Representative: Ram P. [Signature]
 Date: 8/17/23 Date: 8/17/23

Instrument Calibration Sheet (Analog)			
	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/17/2023
	Manufacturer Siemens	Model # 7M15034-48A01-2-Y15	Serial # PBD-92112053
	Engineering Units ft	Range 0 12	Tag No ROR-LIT-1001 Process Brine Tank Level A

Installation verified by: [Signature] Termination verified by: [Signature] Safety precautions verified by: [Signature]

Test Equipment Used:			
MFR: Fluke	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/23
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA	4.01 mA	0 ft
25%	8 mA	8 mA	8.01 mA	3 ft
50%	12 mA	12 mA	11.99 mA	5 ft
75%	16 mA	16 mA	16 mA	9 ft
100%	20 mA	20 mA	19.99 mA	11.99 ft

Calibrated by: [Signature]
Date: 8/17/23

Owner's Representative: [Signature]
Date: 8/17/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No SA-PIT-1003
	Manufacturer Rosemount	Model # 3051CG4A2A1AM5DF	Serial #	Process Air System Pressure
	Engineering Units psi	Range 0 200		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 psi	3.99 mA	0.01 psi
25%	8 mA	50 psi	7.99 mA	50.2 psi
50%	12 mA	100 psi	11.99 mA	100.03 psi
75%	16 mA	150 psi	15.99 mA	150.04 psi
100%	20 mA	200 psi	19.97 mA	200.05 psi

Calibrated by: [Signature]
 Date: 12/5/23

Owner's Representative: [Signature]
 Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No CIP-FIT-1011
	Manufacturer E + H	Model # 5WAC1H-AAELHP2DHA1SGA+AACB1721	Serial # T81A4E19000	Process CIP Solution Flow
Engineering Units gpm	Range 0 1500			

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.99 mA	0.02 gpm
25%	8 mA	375 gpm	7.98 mA	375.09 gpm
50%	12 mA	750 gpm	11.99 mA	750.13 gpm
75%	16 mA	1125 gpm	15.97 mA	1125.18 gpm
100%	20 mA	1500 gpm	19.99 mA	1500.18 gpm

Calibrated by: [Signature]
Date: 12/5/23

Owner's Representative: [Signature]
Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No CIP-FIT-2011
	Manufacturer E + H	Model # 5W4C1H-AAELHP2DHA15GA-AAC817Z1	Serial # T81A3919000	Process CIP Waste Flow
Engineering Units gpm	Range 0 300			

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	4.0 mA	0.009 gpm
25%	8 mA	75 gpm	8.01 mA	75.01 gpm
50%	12 mA	150 gpm	11.99 mA	150.01 gpm
75%	16 mA	225 gpm	15.99 mA	225.01 gpm
100%	20 mA	300 gpm	19.99 mA	300.02 gpm

Calibrated by: Shuchi Akhman
Date: 12/15/23

Owner's Representative: [Signature]
Date: 12/15/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/6/2023	Tag No CIP-LIT-1101
	Manufacturer Dwyer	Model # PAL72-5-100-PU	Serial #	Process CIP Tank Level
Engineering Units ft	Range 0	11.5		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.


Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 ft	4.01 mA	0 ft
25%	8 mA	2.875 ft	8.01 mA	2.87 ft
50%	12 mA	5.75 ft	12.02 mA	5.74 ft
75%	16 mA	8.625 ft	16.01 mA	8.62 ft
100%	20 mA	11.5 ft	20.01 mA	11.48 ft

Calibrated by: Glenn Anderson Date: 12/6/23
 Owner's Representative: [Signature] Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP Manufacturer Rosemount Engineering Units pH	Customer City of Santa Monica Model # 1056-03-22-38-AN Range 0 14	Date 12/5/2023 Serial # CIP-AIT-1001 Process CIP Solution pH
---	---	--	---

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.


Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	4.01 mA	0.006 pH
25%	8 mA	3.5 pH	7.99 mA	3.498 pH
50%	12 mA	7 pH	11.99 mA	6.998 pH
75%	16 mA	10.5 pH	15.98 mA	10.499 pH
100%	20 mA	14 pH	19.99 mA	13.999 pH

Calibrated by: [Signature] Date: 12/5/23
 Owner's Representative: [Signature] Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No CIP-FIT-1401
	Manufacturer E + H	Model # 5W4C1H-AAELHP2DHA1SGA+AACB17Z1	Serial # T81A3A19000	Process ROP Flow
	Engineering Units gpm	Range 0 1000		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.98 mA	0.02 gpm
25%	8 mA	250 gpm	7.98 mA	250.01 gpm
50%	12 mA	500 gpm	11.99 mA	499.97 gpm
75%	16 mA	750 gpm	15.98 mA	749.96 gpm
100%	20 mA	1000 gpm	19.99 mA	999.9 gpm

Calibrated by: Handwritten Signature Date: 12/5/23
 Owner's Representative: Handwritten Signature Date: 12/5/23

Instrument Calibration Sheet (Analog)

Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/6/2023	Tag No FWS-LIT-1001
Manufacturer Dwyer	Model # PBLT2-7-100-PU	Serial #	Process RO Flush Tank Level
Engineering Units ft	Range 0		
			16.156

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.


Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 ft	3.99 mA	0 ft
25%	8 mA	4.039 ft	7.98 mA	4.04 ft
50%	12 mA	8.078 ft	11.99 mA	8.07 ft
75%	16 mA	12.117 ft	15.98 mA	12.115 ft
100%	20 mA	16.156 ft	19.99 mA	16.156 ft

Calibrated by: Edward Adams Owner's Representative: [Signature]
 Date: 12/6/23 Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No FWS-FIT-1301
	Manufacturer E + H	Model # 5W4C2H-AAELHP2DHA15GA+AACB17Z1	Serial # RO Flush System Flow	
Engineering Units gpm	Range 0 1000			

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.99 mA	0.01 gpm
25%	8 mA	250 gpm	7.98 mA	249.98 gpm
50%	12 mA	500 gpm	11.99 mA	499.99 gpm
75%	16 mA	750 gpm	15.98 mA	749.98 gpm
100%	20 mA	1000 gpm	19.99 mA	999.92 gpm

Calibrated by: [Signature]
 Date: 12/5/23

Owner's Representative: [Signature]
 Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023
Manufacturer E + H	Model # 5W4C3H-AAELHP2DHA1SGA+AACB17Z1	Serial # T71DB719000	Tag No BPS-FIT-1001
Engineering Units gpm	Range 0 4000		Process Booster Pump Discharge Flow

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	4.01 mA	0 gpm
25%	8 mA	1000 gpm	8.01 mA	999.7 gpm
50%	12 mA	2000 gpm	12.01 mA	2000.17 gpm
75%	16 mA	3000 gpm	16.02 mA	3000.6 gpm
100%	20 mA	4000 gpm	20.01 mA	4001 gpm

Calibrated by: [Signature] Date: 12/5/23

Owner's Representative: [Signature] Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/31/2023	Tag No ROF-AIT-1015
	Manufacturer ROSEMOUNT Engineering Units NTU	Model # T1056-02-10-20-30-71 Range 0 100	Serial # E23-31905762-002	Process Cartridge Filter Inlet Turbidity

Installation verified by: G.A.

Safety precautions verified by: RP.

Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
MFR:		MODEL:	
		SER #:	
		CAL DATE:	7/10/2023
		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA 0 NTU	3.97 mA	0 NTU
25%	8 mA	8 mA 25 NTU	7.97 mA	24.87 NTU
50%	12 mA	12 mA 50 NTU	11.96 mA	49.89 NTU
75%	16 mA	16 mA 75 NTU	15.99 mA	74.89 NTU
100%	20 mA	20 mA 100 NTU	19.99 mA	99.91 NTU

Calibrated by: Quil del
Date: 12/15/23

Owner's Representative: [Signature]
Date: 12/15/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/22/2023	Tag No ROF-PIT-1101
	Manufacturer Rosemount Engineering Units psi	Model # 7ML5034-4BA01-Z-Y15 Range 0 50	Serial # 22SHPG0348100	Process Cartridge Filter Inlet Pressure

Installation verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: Fluke	MODEL: 789	SER #: 5607006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA 0 psi	4.01 mA	0 PSI
25%	8 mA	8 mA 12.5 psi	8.01 mA	12.5 PSI
50%	12 mA	12 mA 25 psi	12.01 mA	25 PSI
75%	16 mA	16 mA 37.5 psi	16.01 mA	37.5 PSI
100%	20 mA	20 mA 50 psi	20.01 mA	50 PSI

Calibrated by: [Signature]
Date: 12/5/23

Owner's Representative: [Signature]
Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 9/11/2023
Manufacturer Siemens	Model # 7ML5034-4BA01-2Y15	Serial # PBD-P7180005	Tag No NSO4-LIT-1101
Engineering Units FT	Range 0 11.5		Process NSO4 Tank Level

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP


Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 FT	3.96 mA	0 FT
25%	8 mA	2.88 FT	7.92 mA	2.87 FT
50%	12 mA	5.75 FT	11.84 mA	5.75 FT
75%	16 mA	8.63 FT	15.78 mA	8.62 FT
100%	20 mA	11.5 FT	19.74 mA	11.5 FT

Calibrated by: [Signature] Date: 12/6/23
 Owner's Representative: [Signature] Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 9/11/2023	Tag No AS-LIT-1101
	Manufacturer Siemens	Model # 7ML5034-4BA01-2+Y15	Serial # PBD-P7180004	Process AS Tank Level
Engineering Units FT	Range 0	Range 7.5		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.


Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 FT	3.97 mA	0 FT
25%	8 mA	1.88 FT	7.92 mA	1.87 FT
50%	12 mA	3.75 FT	11.87 mA	3.75 FT
75%	16 mA	5.63 FT	15.82 mA	5.62 FT
100%	20 mA	7.5 FT	19.74 mA	7.5 FT

Calibrated by: Harold Callahan Owner's Representative: [Signature]
 Date: 12/6/23 Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 9/11/2023	Tag No HSO4-LIT-7101
	Manufacturer Siemens	Model # 7MIL5034-4BA01-Z+Y1S	Serial # PBD-P7180001	Process HSO4 Storage Tank 1 Level
Engineering Units FT	Range 0	Range 12.41		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:			
MFR:	FLUKE	MODEL: 789	SER #: 5507006
MFR:		MODEL:	SER #:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 FT	3.94 mA	0 FT
25%	8 mA	3.1 FT	7.89 mA	3.1 FT
50%	12 mA	6.2 FT	11.84 mA	6.21 FT
75%	16 mA	9.31 FT	15.78 mA	9.31 FT
100%	20 mA	12.41 FT	19.76 mA	12.41 FT

Calibrated by: Robert Ash
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 9/11/2023	Tag No HF-LIT-1101
	Manufacturer Siemens	Model # 7ML5034-4BA01-Z+Y15	Serial # PBD-P7180002	Process HF Tank Level
Engineering Units FT	Range 0 10			

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 FT	3.96 mA	0 FT
25%	8 mA	1.39 FT	7.91 mA	1.39 FT
50%	12 mA	2.78 FT	11.86 mA	2.77 FT
75%	16 mA	4.17 FT	15.81 mA	4.17 FT
100%	20 mA	5.56 FT	19.76 mA	5.56 FT

Calibrated by: [Signature] Date: 12/16/23
 Owner's Representative: [Signature] Date: 12/16/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/24/2023	Tag No FS-PT-1001
	Manufacturer E + H	Model # 5W4C6H-AAGLH2DHA1SGA+AACB7Z1	Serial # 781A0119000	Process Reservoir Inlet Flow
	Engineering Units GPH	Range 0 8000		

Installation verified by: [Signature]Termination verified by: [Signature]Safety precautions verified by: [Signature]

Test Equipment Used:

MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/23
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA	3.98 mA	0.0 gpm
25%	8 mA	8 mA	7.98 mA	199.6 gpm
50%	12 mA	12 mA	11.99 mA	400.3 gpm
75%	16 mA	16 mA	15.98 mA	600.6 gpm
100%	20 mA	20 mA	19.98 mA	800.2 gpm


Calibrated by: [Signature]

Date: 8/24/23

Owner's Representative: [Signature]

Date: 8/24/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/16/23	Tag No RO-AIT-1109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-31788499-002	Process RO Train 1 pH
Engineering Units pH	Range 0 14			

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP

Test Equipment Used:

MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	3.99 mA	0 pH
25%	8 mA	3.5 pH	11.98 mA	2.57 pH
50%	12 mA	7 pH	11.98 mA	9.01 pH
75%	16 mA	10.5 pH	15.97 mA	10.51 pH
100%	20 mA	14 pH	19.97 mA	14 pH

Calibrated by: Devesh Ashok
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/6/23	Tag No RO-AIT-1109
Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # 122-31788499-002	Process RO Train 1 Conductivity
Engineering Units µS/cm	Range 0 - 20000		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 µS/cm	3.99 mA	0 µS/cm
25%	8 mA	5000 µS/cm	4980 mA	4981 µS/cm
50%	12 mA	10000 µS/cm	11.98 mA	14984 µS/cm
75%	16 mA	15000 µS/cm	15.97 mA	14988 µS/cm
100%	20 mA	20000 µS/cm	19.97 mA	19991 µS/cm

Calibrated by: [Signature]
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/16/2023	Tag No RO-AIT-2109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # 122-30969059-001	Process RO Train 2 pH
	Engineering Units pH	Range 0 14		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP


Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	4.01 mA	0 pH
25%	8 mA	3.5 pH	8.02 mA	3.49 pH
50%	12 mA	7 pH	11.99 mA	6.99 pH
75%	16 mA	10.5 pH	16.01 mA	10.48 pH
100%	20 mA	14 pH	20.01 mA	13.99 pH

Calibrated by: Severin Odeh Owner's Representative: [Signature]
 Date: 8/16/23 Date: 12/17/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/16/2023	Tag No RO-AIT-2109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-30969059-001	Process RO Train 2 Conductivity
	Engineering Units µS/cm	Range 0 20000		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 µS/cm	4.01 mA	0 µS/cm
25%	8 mA	5000 µS/cm	8.02 mA	4997 µS/cm
50%	12 mA	10000 µS/cm	11.99 mA	9999 µS/cm
75%	16 mA	15000 µS/cm	16.01 mA	14998 µS/cm
100%	20 mA	20000 µS/cm	20.01 mA	19999 µS/cm

Calibrated by: [Signature]
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-AIT-3109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # I22-31788499-003	Process RO Train 3 pH
	Engineering Units pH	Range 0 14		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	3.99 mA	0 pH
25%	8 mA	3.5 pH	8.01 mA	3.51 pH
50%	12 mA	7 pH	11.99 mA	7.0 pH
75%	16 mA	10.5 pH	15.99 mA	10.49 pH
100%	20 mA	14 pH	19.98 mA	14 pH

Calibrated by: Shawn Cole
Date: 12/16/23

Owner's Representative: [Signature]
Date: 12/16/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-AIT-3109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-31788499-003	Process RO Train 3 Conductivity
	Engineering Units µS/cm	Range 0 20000		

Installation verified by: G.A.

Safety precautions verified by: RP

Termination verified by: G.A.

Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 µS/cm	3.99 mA	0 µS/cm
25%	8 mA	5000 µS/cm	8.01 mA	4999 µS/cm
50%	12 mA	10000 µS/cm	11.99 mA	9998 µS/cm
75%	16 mA	15000 µS/cm	15.99 mA	14999 µS/cm
100%	20 mA	20000 µS/cm	19.98 mA	19999 µS/cm

Calibrated by: Harold Dehule
Date: 12/16/23

Owner's Representative: [Signature]
Date: 12/16/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP Manufacturer RoseMount Engineering Units pH	Customer City of Santa Monica Model # 1056-03-20-32-AN Range 0 14	Date 6/23/2023 Serial # J22-31788499-001 Tag No RO-AIT-4109 Process RO Train 4 pH
---	---	--	--

Installation verified by: G.A.

Safety precautions verified by: RP

Termination verified by: G.A.

Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	3.98 mA	0 pH
25%	8 mA	3.5 pH	7.99 mA	3.5 pH
50%	12 mA	7 pH	11.97 mA	7.0 pH
75%	16 mA	10.5 pH	15.98 mA	10.5 pH
100%	20 mA	14 pH	19.97 mA	14 pH

Calibrated by: Leanne Oshroy
Date: 11/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-AIT-4109
Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # 122-31788499-001	Process RO Train 4 Conductivity
Engineering Units µS/cm	Range 0 20000		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 µS/cm	3.98 mA	0 µS/cm
25%	8 mA	5000 µS/cm	7.99 mA	5000 µS/cm
50%	12 mA	10000 µS/cm	11.97 mA	9999 µS/cm
75%	16 mA	15000 µS/cm	15.98 mA	14997 µS/cm
100%	20 mA	20000 µS/cm	19.97 mA	20000 µS/cm

Calibrated by: Shirley Ochoa Date: 12/6/23

Owner's Representative: [Signature] Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/6/23	Tag No RO-FIT-1105
	Manufacturer E + H	Model # 5W4C1F-AAELHP2DHA1SGA+AACB17Z1	Serial # 22SHPG0326307	Process 3rd Stage Blocks Inlet Flow
Engineering Units gpm	Range 0	700		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.98 mA	0 gpm
25%	8 mA	175 gpm	7.99 mA	174.9 gpm
50%	12 mA	350 gpm	11.97 mA	349.9 gpm
75%	16 mA	525 gpm	15.97 mA	524.8 gpm
100%	20 mA	700 gpm	19.98 mA	699.8 gpm

Calibrated by: George Oddy
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/16/2023	Tag No RO-FIT-2105
	Manufacturer E + H	Model # 5W4C1F-AAELHP2DHA1SGA+AACB17Z1	Serial # T6105319000	Process 3rd Stage Blocks Inlet Flow
Engineering Units gpm	Range 0 700			

Installation verified by: G.A.

Termination verified by: G.A. Safety precautions verified by: RL

Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.98 mA	0 gpm
25%	8 mA	175 gpm	7.98 mA	174.9 gpm
50%	12 mA	350 gpm	11.98 mA	350 gpm
75%	16 mA	525 gpm	15.98 mA	524.9 gpm
100%	20 mA	700 gpm	19.97 mA	699.8 gpm

Calibrated by: [Signature]
Date: 12/16/23

Owner's Representative: [Signature]
Date: 12/14/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Tag No RO-FIT-3105
Manufacturer E + H	Model # SW4C1F-AAELHP2DHA1S1GA-AAACB17Z1	Serial # T6105419000	Process 3rd Stage Blocks Inlet Flow
Engineering Units gpm	Range 0 700		

Installation verified by: G. A. Termination verified by: G. A. Safety precautions verified by: RP


Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected RU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	4.02 mA	0.1 gpm
25%	8 mA	175 gpm	7.99 mA	175.1 gpm
50%	17 mA	350 gpm	17.01 mA	350.1 gpm
75%	16 mA	525 gpm	15.99 mA	525.1 gpm
100%	20 mA	700 gpm	20.01 mA	700 gpm

Calibrated by: Ronald Chisholm Owner's Representative: [Signature]
 Date: 12/6/23 Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-FIT-4105
	Manufacturer E + H	Model # 5W4C1F-AAELHP2DHA1 SGA+AAC81721	Serial # T6105519000	Process 3rd Stage Blocks Inlet Flow
Engineering Units gpm	Range 0 700			

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP


Test Equipment Used:				
MFR:	FLUKE	MODEL:	789	SER #:
				5507006
MFR:		MODEL:		CAL DATE:
				7/10/2023

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	4.01 mA	0.0 gpm
25%	8 mA	175 gpm	8.02 mA	175.1 gpm
50%	12 mA	350 gpm	12.01 mA	350.0 gpm
75%	16 mA	525 gpm	16.03 mA	525.1 gpm
100%	20 mA	700 gpm	19.99 mA	700.1 gpm

Calibrated by: [Signature] Date: 12/16/23
 Owner's Representative: [Signature] Date: 12/14/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP Manufacturer Rosemount Engineering Units psi	Customer City of Santa Monica Model # 3051CG4A22A1AB4M5Q4 Range 0 150	Date 12/6/23 Serial # T6105219000	Tag No RO-PIT-1200 Process RO Train 1 Pressure
---	--	---	--	---

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.A.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

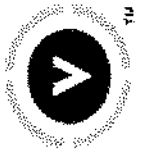
Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 psi	4.01 mA	0 psi
25%	8 mA	37.5 psi	8.03 mA	37.5 psi
50%	12 mA	75 psi	12.02 mA	75 psi
75%	16 mA	112.5 psi	16.01 mA	112.5 psi
100%	20 mA	150 psi	20.01 mA	150 psi

Calibrated by: Shawel Alshikh
 Date: 12/6/23

Owner's Representative: [Signature]
 Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/16/2023	Tag No RO-PJT-2200
	Manufacturer Rosemount	Model # 3051CG4A22A1AB4M5Q4	Serial # 22SHPG0326308	Process RO Train 2 Pressure
Engineering Units psi	Range 0 150			

Installation verified by: G. A. Termination verified by: G. A. Safety precautions verified by: RR


Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 psi	4.01 mA	0 psi
25%	8 mA	37.5 psi	8.01 mA	37.51 psi
50%	12 mA	75 psi	12.01 mA	75.01 psi
75%	16 mA	112.5 psi	16.02 mA	112.51 psi
100%	20 mA	150 psi	20.01 mA	150.0 psi

Calibrated by: [Signature] Owner's Representative: [Signature]
 Date: 12/6/23 Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-PIT-3200
	Manufacturer Rosemount	Model # 3051CG4A22A1AB4M5Q4	Serial # 225HPG0326309	Process RO Train 3 Pressure
	Engineering Units psi	Range 0 150		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 psi	3.99 mA	0 psi
25%	8 mA	37.5 psi	7.98 mA	37.50 psi
50%	12 mA	75 psi	11.99 mA	75.01 psi
75%	16 mA	112.5 psi	15.98 mA	112.51 psi
100%	20 mA	150 psi	19.97 mA	149.9 psi

Calibrated by: Handwritten Signature Owner's Representative: Handwritten Signature
 Date: 7/16/23 Date: 12/16/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023
Manufacturer Rosemount	Model # 3051CG4A2A1AB4M5Q4	Serial # J22-31788499-001	Tag No RO-PT-4200
Engineering Units psi	Range 0 150		Process RO Train 4 Pressure

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

Test Equipment Used:

MFR: FLUKE	MODEL: 789	SER #: 6507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 psi	4.02 mA	0 psi
25%	8 mA	37.5 psi	8.01 mA	37.49 psi
50%	12 mA	75 psi	12.02 mA	75.01 psi
75%	16 mA	112.5 psi	16.02 mA	112.49 psi
100%	20 mA	150 psi	20.01 mA	150.0 psi

Calibrated by: David A. Date: 12/6/17

Owner's Representative: [Signature] Date: 12/10/17



320 Goddard Way Suite 200
Irvine, CA 92618
949.648.5200

1 Submittal Review

Proj. Name:	Olympic Well Field and Arcadia WTP Expansion	Project No.:	11200982
Contractor:	Walsh/BC	Date:	12/19/2023
Spec. Sect. #:	40 61 13	Dwg.:	
Submittal:	4006113-005 Transmitter Calibration Test Data		

Comments:

Action Taken:

- No Exceptions Taken Revise and Resubmit
- Make Corrections Noted Reject and Resubmit
- For Information Only

This review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of his or her work with that of all other trades; and for performing all work in a safe and satisfactory manner.

GHD
Irvine, CA

Reviewed By: City of Santa Monica/GHD Date: 12-20-2023
Approved By: Carlos Rosales Date: 12-20-2023



929 W Adams Street
Chicago, IL 60607
PH: 312-563-5400 Fax: 312-492-0601

SM Arcadia WTP Expansion Phase II

1228 S Bundy Drive
Los Angeles, CA 90025

Tel: Fax:
Job # 221119

TRANSMITTAL

TRNS-00748

CITY OF SANTA MONICA
Contract # 10981 (CCS)
Project # SP2602

Date: December 20, 2023

To: Zach Pollard

CITY OF SANTA MONICA
1438 4TH STREET SUITE 300
SANTA MONICA CA 90401
TEL: 310-458-8721
FAX:

From: Omar Ponce

Walsh Construction Company II, LLC
929 W Adams Street
Chicago, IL 60607

Submittal Package Info:

Submittal Package Number	Description	Spec Section	Package Status
406113-005	Transmitter Calibration Test Data	N/A	Submitted for Approval
Package Transmitted For:		Package Sent Via:	

Line	Qty	Submittal No.	Review Cycle	Spec Section	Sub Section	Description	Type	Status
1		406113-005	1	N/A	N/A	Transmitter Calibration Test Data	Test Report	

CC: **Project Contact:** Project File **Project Partner:**

NOTE: For 3rd Party Documents that may be enclosed (if any): Opinions and recommendations expressed by a third party is strictly that of the third party. Such opinions and recommendations shall not shift design responsibility from those as identified in the contract documents. All rights reserved.

Remarks:

Signature: _____

Signature Date: _____



10623 Fulton Wells Avenue, Santa Fe Springs, CA 90670
 P: 562-946-0700 F: 562-946-0701
csielectric.com

SUBMITTAL

Project: Arcadia WTP Expansion **To:** Walsh Construction Company
Project Number: 211053.10 **Address:** 9915 Mira Mesa Blvd., Ste #230
Project Manager: John Hogan **San Diego, CA 92131**
E-mail: john.hogan@csielectric.com
dexter.cudal@csielectric.com

CSI Submittal #: 98 **Attn:** Octavio Ramos
Specification Section: 40 61 13-H **cc:** sdjamesson@walshgroup.com

Description: Transmitter Calibration Test Data
Date Sent: 12/19/23 **Due:** 12/26/23 **cc:** rpadilla@walshgroup.com
Date Received: _____ **cc:** brian.basler@csielectric.com
GC Submittal #: _____ **cc:** andrew.zaragoza@csielectric.com
Submittal Status: _____

Submittal Notes

Item #	Description	Notes/Comments	Item Status
1	page 1 - Transmittal		
2	page 2 - Cover		
3	page 3 - 40 61 13-H. Transmitter Calibration Test Data		

Item # **Review Comment** **Response to Comment**



ELECTRICAL CONTRACTORS, INC.


211053.10

**40 61 13-H. Transmitter Calibration
Test Data**

**Olympic Well Field Restoration and
Arcadia WTP Expansion**

**Headquarters
10623 Fulton Wells Avenue
Santa Fe Springs, CA 90670
(562) 946-0700 csielectric.com**

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 10/6/2023	Tag No GAC-FIT-4020
	Manufacturer E+H	Model # 5W4C2H-AAELHP2DHA1SGA+AACB17Z1	Serial # V33AA619000	Process GAC TRAIN 4 RO FEED SUPPLY
	Engineering Units GPM	Range 0 1500		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RL

Test Equipment Used:			
MFR:	FLUKE	MODEL: 789	SER #: 5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	SER #:
			CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 GPM	3.998 mA	0 GPM
25%	8 mA	375 GPM	7.999 mA	375.03 GPM
50%	12 mA	750 GPM	12.000 mA	750.11 GPM
75%	16 mA	1125 GPM	16.001 mA	1125.28 GPM
100%	20 mA	1500 GPM	20.002 mA	1500.43 GPM

Calibrated by: *Harold Cobble*
 Date: 12/15/23

Owner's Representative: *Paul P...*
 Date: 12/15/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 10/6/2023	Tag No GAC-FIT-3020
	Manufacturer E+H	Model # 5W4C2H-AAELHP2DHA1SGA+AACBI7Z1	Serial # V33AA719000	Process GAC TRAIN 3 RO FEED SUPPLY
	Engineering Units GPM	Range 0 1500		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 GPM	3.997 mA	0 GPM
25%	8 mA	375 GPM	7.997 mA	374.84 GPM
50%	12 mA	750 GPM	11.997 mA	749.94 GPM
75%	16 mA	1125 GPM	15.997 mA	1125.06 GPM
100%	20 mA	1500 GPM	19.997 mA	1500.15 GPM

Calibrated by: *[Signature]*
Date: 12/5/23

Owner's Representative: *[Signature]*
Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 10/6/2023	Tag No GAC-FIT-2020
	Manufacturer E+H	Model # 5W4C2H-AAELHP2DHA1SGA+AACBI7Z1	Serial # T81A4D19000	Process GAC TRAIN 2 RO FEED SUPPLY
	Engineering Units GPM	Range 0 1500		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 GPM	3.999 mA	0 GPM
25%	8 mA	375 GPM	7.999 mA	374.92 GPM
50%	12 mA	750 GPM	11.999 mA	749.94 GPM
75%	16 mA	1125 GPM	15.999 mA	1124.89 GPM
100%	20 mA	1500 GPM	19.999 mA	1499.89 GPM

Calibrated by: *General Optics*
Date: 12/5/23

Owner's Representative: *[Signature]*
Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 10/6/2023	Tag No GAC-FIT-1020
	Manufacturer E+H	Model # 5W4C2H-AAELHP2DHA1SGA+AACBI7Z1	Serial # T81A4C19000	Process GAC TRAIN 1 RO FEED SUPPLY
	Engineering Units GPM	Range 0 1500		

Installation verified by: G. A.

Termination verified by: G. A.

Safety precautions verified by: R.P.

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 GPM	3.997 mA	0 GPM
25%	8 mA	375 GPM	7.998 mA	374.88 GPM
50%	12 mA	750 GPM	11.998 mA	749.98 GPM
75%	16 mA	1125 GPM	15.998 mA	1125.03 GPM
100%	20 mA	1500 GPM	19.998 mA	1500.09 GPM

Calibrated by: *[Signature]*
Date: 12/15/23

Owner's Representative: *[Signature]*
Date: 12/15/23

Instrument Calibration Sheet (Analog)

	Job #/Location	Customer	Date	Tag No
	Arcadia WTP	City of Santa Monica	8/15/2023	ROR-PIT-1020
	Manufacturer	Model #	Serial #	Process
	Rosemount	3051CG4A22A1AM5DF	223MP60340185	Brine
	Engineering Units	Range		
psi	0 200			

 Installation verified by: [Signature]

 Termination verified by: [Signature]

 Safety precautions verified by: R.P.

Test Equipment Used:

MFR: <u>Fluke</u>	MODEL: <u>789</u>	SER #: <u>5507006</u>	CAL DATE: <u>7/10/23</u>
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:


Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA	4.007 mA	0 PSI
25%	8 mA	8 mA	7.96 mA	49.24 PSI
50%	12 mA	12 mA	12.005 mA	99.49 PSI
75%	16 mA	16 mA	16.0002 mA	149.99 PSI
100%	20 mA	20 mA	20.003 mA	199.99 PSI

 Calibrated by: [Signature]

 Date: 8/15/23

 Owner's Representative: [Signature]

 Date: 8/15/23

Instrument Calibration Sheet (Analog)				
	Job #/Location	Customer	Date	Tag No
	Arcadia WTP	City of Santa Monica	8/17/2023	ROR-LIT-1002
	Manufacturer	Model #	Serial #	Process
	Siemens	7ML5034-4BA01-2+Y15	P8D-P8112053	Brine Tank Level B
	Engineering Units	Range		
ft	0 12			

Installation verified by: *[Signature]* Termination verified by: *[Signature]* Safety precautions verified by: *[Signature]*


Test Equipment Used:			
MFR: <u>Fluke</u>	MODEL: <u>789</u>	SER #: <u>5507006</u>	CAL DATE: <u>7/10/23</u>
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA	4.01 mA	0 FE
25%	8 mA	8 mA	8.00 mA	2.94 FE
50%	12 mA	12 mA	12.01 mA	6 FE
75%	16 mA	16 mA	15.99 mA	8.94 FE
100%	20 mA	20 mA	19.99 mA	11.94 FE

Calibrated by: *[Signature]*
Date: 8/17/23

Owner's Representative: *[Signature]*
Date: 8/17/23

Instrument Calibration Sheet (Analog)				
	Job #/Location	Customer	Date	Tag No
	Arcadia WTP	City of Santa Monica	8/17/2023	ROR-LIT-1001
	Manufacturer	Model #	Serial #	Process
	Siemens	7MLS034-4BA01-Z+Y15	P80-P2112.053	Brine Tank Level A
	Engineering Units	Range		
	ft	0 12		

Installation verified by: [Signature]

Termination verified by: [Signature]

Safety precautions verified by: [Signature]

Test Equipment Used:			
MFR: Fluke	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/23
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA	4.01 mA	0 ft
25%	8 mA	8 mA	8.01 mA	3 ft
50%	12 mA	12 mA	11.99 mA	5 ft
75%	16 mA	16 mA	16 mA	9 ft
100%	20 mA	20 mA	19.99 mA	11.99 ft

Calibrated by: [Signature]
 Date: 8/17/23

Owner's Representative: [Signature]
 Date: 8/17/23

Instrument Calibration Sheet (Analog)



Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No CIP-FIT-1011
Manufacturer E + H	Model # 5W4C1H-AAELHP2DHA1SGA+AACBI721	Serial # T81A4F19000	Process CIP Solution Flow
Engineering Units gpm	Range 0 1500		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.


Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.99 mA	0.02 gpm
25%	8 mA	375 gpm	7.98 mA	375.09 gpm
50%	12 mA	750 gpm	11.99 mA	750.13 gpm
75%	16 mA	1125 gpm	15.97 mA	1125.18 gpm
100%	20 mA	1500 gpm	19.99 mA	1500.18 gpm

Calibrated by: [Signature]
Date: 12/5/23

Owner's Representative: [Signature]
Date: 12/5/23

Instrument Calibration Sheet (Analog)				
	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No CIP-FIT-2011
	Manufacturer E + H	Model # 5W4C1H-AAELHP2DHA1SGA+AACBI7Z1	Serial # T81A3919000	Process CIP Waste Flow
	Engineering Units gpm	Range 0 300		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	4.0 mA	0.009 gpm
25%	8 mA	75 gpm	8.01 mA	75.01 gpm
50%	12 mA	150 gpm	11.99 mA	150.01 gpm
75%	16 mA	225 gpm	15.99 mA	225.01 gpm
100%	20 mA	300 gpm	19.99 mA	300.02 gpm

Calibrated by: Steve Ashur
Date: 12/5/23

Owner's Representative: [Signature]
Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/6/2023	Tag No CIP-LIT-1101
	Manufacturer Dwyer	Model # PBLT2-5-100-PU	Serial #	Process CIP Tank Level
	Engineering Units ft	Range 0 11.5		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: R.P.


Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 ft	4.01 mA	0 ft
25%	8 mA	2.875 ft	8.01 mA	2.87 ft
50%	12 mA	5.75 ft	12.02 mA	5.74 ft
75%	16 mA	8.625 ft	16.01 mA	8.62 ft
100%	20 mA	11.5 ft	20.01 mA	11.48 ft

Calibrated by: [Signature]
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)			
	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023
	Manufacturer Rosemount	Model # 1056-03-22-38-AN	Serial #
	Engineering Units pH	Range 0 14	
			Tag No CIP-AIT-1001 Process CIP Solution pH

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	4.01 mA	0.006 pH
25%	8 mA	3.5 pH	7.99 mA	3.498 pH
50%	12 mA	7 pH	11.99 mA	6.998 pH
75%	16 mA	10.5 pH	15.98 mA	10.499 pH
100%	20 mA	14 pH	19.99 mA	13.999 pH

Calibrated by: [Signature]
Date: 12/5/23

Owner's Representative: [Signature]
Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No CIP-FIT-1401
	Manufacturer E + H	Model # 5W4C1H-AAELHP2DHA1SGA+AACBI7Z1	Serial # T81A3A19000	Process ROP Flow
	Engineering Units gpm	Range 0 1000		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.98 mA	0.02 gpm
25%	8 mA	250 gpm	7.98 mA	250.01 gpm
50%	12 mA	500 gpm	11.99 mA	499.97 gpm
75%	16 mA	750 gpm	15.98 mA	749.96 gpm
100%	20 mA	1000 gpm	19.99 mA	999.9 gpm

Calibrated by: *Handwritten Signature*
Date: 12/5/23

Owner's Representative: *Handwritten Signature*
Date: 12/5/23

Instrument Calibration Sheet (Analog)



Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/6/2023	Tag No FWS-LIT-1001
Manufacturer Dwyer	Model # PBLT2-7-100-PU	Serial #	Process RO Flush Tank Level
Engineering Units ft	Range 0 16.156		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:

MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 ft	3.99 mA	0 ft
25%	8 mA	4.039 ft	7.98 mA	4.04 ft
50%	12 mA	8.078 ft	11.99 mA	8.07 ft
75%	16 mA	12.117 ft	15.98 mA	12.115 ft
100%	20 mA	16.156 ft	19.99 mA	16.156 ft

Calibrated by: [Signature]
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/5/2023	Tag No FWS-FIT-1301
	Manufacturer E + H	Model # 5W4C2H-AAELHP2DHA15GA+AACBI7Z1	Serial #	Process RO Flush System Flow
	Engineering Units gpm	Range 0 1000		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:				
MFR:	FLUKE	MODEL:	789	SER #:
				5507006
		CAL DATE:	7/10/2023	
MFR:		MODEL:		SER #:
		CAL DATE:		


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.99 mA	0.01 gpm
25%	8 mA	250 gpm	7.98 mA	249.98 gpm
50%	12 mA	500 gpm	11.99 mA	499.99 gpm
75%	16 mA	750 gpm	15.98 mA	749.98 gpm
100%	20 mA	1000 gpm	19.99 mA	999.92 gpm

Calibrated by: [Signature]
Date: 12/5/23

Owner's Representative: [Signature]
Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/31/2023	Tag No ROF-AIT-1015
	Manufacturer ROSEMOUNT	Model # T1056-02-10-20-30-71	Serial # E23-31905762-002	Process Cartridge Filter Inlet Turbidity
	Engineering Units NTU	Range 0 100		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:	
SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA 0 NTU	3.97 mA	0 NTU
25%	8 mA	8 mA 25 NTU	7.97 mA	24.87 NTU
50%	12 mA	12 mA 50 NTU	11.96 mA	49.89 NTU
75%	16 mA	16 mA 75 NTU	15.99 mA	74.89 NTU
100%	20 mA	20 mA 100 NTU	19.99 mA	99.91 NTU

Calibrated by: *Daniel Dell*
Date: 12/15/23

Owner's Representative: *Ryan P. ...*
Date: 12/15/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/22/2023	Tag No ROF-PIT-1101
	Manufacturer Rosemount	Model # 7ML5034-4BA01-Z+Y15	Serial # 22SHPG0348100	Process Cartridge Filter Inlet Pressure
	Engineering Units psi	Range 0 50		

Installation verified by: B. A.

Termination verified by: G. A.

Safety precautions verified by: R.P.

Test Equipment Used:			
MFR:	Fluke	MODEL: 789	SER #: 5507006
			CAL DATE: 7/10/2023
MFR:		MODEL:	SER #:
			CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA 0 psi	4.01 mA	0 PSI
25%	8 mA	8 mA 12.5 psi	8.01 mA	12.5 PSI
50%	12 mA	12 mA 25 psi	12.01 mA	25 PSI
75%	16 mA	16 mA 37.5 psi	16.01 mA	37.5 PSI
100%	20 mA	20 mA 50 psi	20.01 mA	50 PSI

Calibrated by: [Signature]
Date: 12/5/23

Owner's Representative: [Signature]
Date: 12/5/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 9/11/2023	Tag No NSO4-LIT-1101
	Manufacturer Siemens	Model # 7ML5034-4BA01-Z+Y15	Serial # P8D-P7180005	Process NSO4 Tank Level
	Engineering Units FT	Range 0 11.5		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 FT	3.96 mA	0 FT
25%	8 mA	2.88 FT	7.92 mA	2.87 FT
50%	12 mA	5.75 FT	11.84 mA	5.75 FT
75%	16 mA	8.63 FT	15.78 mA	8.62 FT
100%	20 mA	11.5 FT	19.74 mA	11.5 FT

Calibrated by: [Signature]
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 9/11/2023	Tag No HSO4-LIT-7101
	Manufacturer Siemens	Model # 7ML5034-4BA01-Z+Y15	Serial # PBD-P7180001	Process HSO4 Storage Tank 1 Level
	Engineering Units FT	Range 0 12.41		

Installation verified by: G. A.

Termination verified by: G. A.

Safety precautions verified by: R.P.

Test Equipment Used:			
MFR:	FLUKE	MODEL: 789	SER #: 5507006
CAL DATE:	7/10/2023		
MFR:		MODEL:	SER #:
CAL DATE:			


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 FT	3.94 mA	0 FT
25%	8 mA	3.1 FT	7.89 mA	3.1 FT
50%	12 mA	6.2 FT	11.84 mA	6.21 FT
75%	16 mA	9.31 FT	15.78 mA	9.31 FT
100%	20 mA	12.41 FT	19.76 mA	12.41 FT

Calibrated by: Robert Allen
Date: 12/6/23

Owner's Representative: Rene Padilla
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 9/11/2023	Tag No HF-LIT-1101
	Manufacturer Siemens	Model # 7ML5034-4BA01-Z+Y15	Serial # PBD-P7180002	Process HF Tank Level
	Engineering Units FT	Range 0 10		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.


Test Equipment Used:			
MFR:	FLUKE	MODEL: 789	SER #: 5507006
CAL DATE:	7/10/2023		
MFR:		MODEL:	SER #:
CAL DATE:			

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 FT	3.96 mA	0 FT
25%	8 mA	1.39 FT	7.91 mA	1.39 FT
50%	12 mA	2.78 FT	11.86 mA	2.77 FT
75%	16 mA	4.17 FT	15.81 mA	4.17 FT
100%	20 mA	5.56 FT	19.76 mA	5.56 FT

Calibrated by: [Signature]
Date: 12/10/23

Owner's Representative: [Signature]
Date: 12/16/23

Instrument Calibration Sheet (Analog)				
	Job #/Location	Customer	Date	Tag No
	Arcadia WTP	City of Santa Monica	8/24/2023	FS-FIT-1001
	Manufacturer	Model #	Serial #	Process
	E + H	5W4C6H-AAGLHP2DHA1SGA+AACBI7Z1	781A0119000	Reservoir Inlet Flow
	Engineering Units	Range		
GPH	0 8000			

Installation verified by: [Signature]

Termination verified by: [Signature]

Safety precautions verified by: R.I.

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/23
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	4 mA	3.98 mA	0.0 gpm
25%	8 mA	8 mA	7.98 mA	1999.6 gpm
50%	12 mA	12 mA	11.99 mA	4,000.3 gpm
75%	16 mA	16 mA	15.98 mA	6,000.6 gpm
100%	20 mA	20 mA	19.98 mA	8001.2 gpm

Calibrated by: [Signature]
Date: 8/24/23

Owner's Representative: Rome Padalk
Date: 8/24/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/6/23	Tag No RO-AIT-1109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-31788499-002	Process RO Train 1 pH
	Engineering Units pH	Range 0 14		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	3.99 mA	0 pH
25%	8 mA	3.5 pH	11.98 mA 7.98 mA	2.57 pH
50%	12 mA	7 pH	11.98 mA	7.01 pH
75%	16 mA	10.5 pH	15.97 mA	10.51 pH
100%	20 mA	14 pH	19.97 mA	14 pH

Calibrated by: *[Signature]*
Date: 12/6/23

Owner's Representative: *[Signature]*
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date <u>12/6/23</u>	Tag No RO-AIT-1109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-31788499-002	Process RO Train 1 Conductivity
	Engineering Units $\mu\text{S/cm}$	Range 0 20000		

Installation verified by: G. A.

Termination verified by: G. A.

Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 $\mu\text{S/cm}$	<u>3.99 mA</u>	<u>0 $\mu\text{S/cm}$</u>
25%	8 mA	5000 $\mu\text{S/cm}$	<u>4980 mA</u> <u>7.98 mA</u>	<u>4981 $\mu\text{S/cm}$</u>
50%	12 mA	10000 $\mu\text{S/cm}$	<u>11.98 mA</u>	<u>9984 $\mu\text{S/cm}$</u>
75%	16 mA	15000 $\mu\text{S/cm}$	<u>15.97 mA</u>	<u>14988 $\mu\text{S/cm}$</u>
100%	20 mA	20000 $\mu\text{S/cm}$	<u>19.97 mA</u>	<u>19991 $\mu\text{S/cm}$</u>

Calibrated by: *Harold Ashby*
Date: 12/6/23

Owner's Representative: *[Signature]*
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/16/2023	Tag No RO-AIT-2109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-30969059-001	Process RO Train 2 pH
	Engineering Units pH	Range 0 14		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	4.01 mA	0 pH
25%	8 mA	3.5 pH	8.02 mA	3.49 pH
50%	12 mA	7 pH	11.99 mA	6.99 pH
75%	16 mA	10.5 pH	16.01 mA	10.48 pH
100%	20 mA	14 pH	20.01 mA	13.99 pH

Calibrated by: *David Allen*
Date: 8/16/23

Owner's Representative: *[Signature]*
Date: 12/6/23

Instrument Calibration Sheet (Analog)



Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/16/2023	Tag No RO-AIT-2109
Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-30969059-001	Process RO Train 2 Conductivity
Engineering Units $\mu\text{S/cm}$	Range 0 20000		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 $\mu\text{S/cm}$	4.01 mA	0 $\mu\text{S/cm}$
25%	8 mA	5000 $\mu\text{S/cm}$	8.02 mA	4997 $\mu\text{S/cm}$
50%	12 mA	10000 $\mu\text{S/cm}$	11.99 mA	9999 $\mu\text{S/cm}$
75%	16 mA	15000 $\mu\text{S/cm}$	16.01 mA	14998 $\mu\text{S/cm}$
100%	20 mA	20000 $\mu\text{S/cm}$	20.01 mA	19999 $\mu\text{S/cm}$

Calibrated by: [Signature]
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-AIT-3109
	Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # I22-31788499-003	Process RO Train 3 pH
	Engineering Units pH	Range 0	14	

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	3.99 mA	0 pH
25%	8 mA	3.5 pH	8.01 mA	3.51 pH
50%	12 mA	7 pH	11.99 mA	7.0 pH
75%	16 mA	10.5 pH	15.99 mA	10.49 pH
100%	20 mA	14 pH	19.98 mA	14 pH

Calibrated by: *Herold Odeh*
 Date: 12/16/23

Owner's Representative: *R.P.*
 Date: 12/16/23

Instrument Calibration Sheet (Analog)



Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-AIT-3109
Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-31788499-003	Process RO Train 3 Conductivity
Engineering Units $\mu\text{S/cm}$	Range 0 20000		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP


Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 $\mu\text{S/cm}$	3.99 mA	0 $\mu\text{S/cm}$
25%	8 mA	5000 $\mu\text{S/cm}$	8.01 mA	4999 $\mu\text{S/cm}$
50%	12 mA	10000 $\mu\text{S/cm}$	11.99 mA	9998 $\mu\text{S/cm}$
75%	16 mA	15000 $\mu\text{S/cm}$	15.99 mA	14999 $\mu\text{S/cm}$
100%	20 mA	20000 $\mu\text{S/cm}$	19.98 mA	19999 $\mu\text{S/cm}$

Calibrated by: *Harold Oshole*
 Date: 12/16/23

Owner's Representative: *[Signature]*
 Date: 12/16/23

Instrument Calibration Sheet (Analog)			
	Job #/Location	Customer	Date
	Arcadia WTP	City of Santa Monica	6/23/2023
	Manufacturer	Model #	Serial #
	RoseMount	1056-03-20-32-AN	J22-31788499-001
Engineering Units	Range		Tag No
pH	0 14		RO-AIT-4109
			Process
			RO Train 4 pH

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:			
MFR:	FLUKE	MODEL:	789
		SER #:	5507006
		CAL DATE:	7/10/2023
MFR:		MODEL:	
		SER #:	
		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 pH	3.98 mA	0 pH
25%	8 mA	3.5 pH	7.99 mA	3.5 pH
50%	12 mA	7 pH	11.97 mA	7.0 pH
75%	16 mA	10.5 pH	15.98 mA	10.5 pH
100%	20 mA	14 pH	19.97 mA	14 pH

Calibrated by: *[Signature]*
 Date: 12/6/23

Owner's Representative: *[Signature]*
 Date: 12/6/23



Instrument Calibration Sheet (Analog)

Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-AIT-4109
Manufacturer RoseMount	Model # 1056-03-20-32-AN	Serial # J22-31788499-001	Process RO Train 4 Conductivity
Engineering Units µS/cm	Range 0 20000		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP

Test Equipment Used:

MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 µS/cm	3.98 mA	0 µS/cm
25%	8 mA	5000 µS/cm	7.99 mA	5000 µS/cm
50%	12 mA	10000 µS/cm	11.97 mA	9999 µS/cm
75%	16 mA	15000 µS/cm	15.98 mA	14997 µS/cm
100%	20 mA	20000 µS/cm	19.97 mA	20000 µS/cm

Calibrated by: [Signature]
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 12/6/23	Tag No RO-FIT-1105
	Manufacturer E + H	Model # 5W4C1F-AAELHP2DHA1SGA+AACBI7Z1	Serial # 22SHPG0326307	Process 3rd Stage Blocks Inlet Flow
	Engineering Units gpm	Range 0 700		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: R.P.

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.98 mA	0 gpm
25%	8 mA	175 gpm	9.99 mA	174.9 gpm
50%	12 mA	350 gpm	11.97 mA	349.9 gpm
75%	16 mA	525 gpm	15.97 mA	524.8 gpm
100%	20 mA	700 gpm	19.98 mA	699.8 gpm

Calibrated by: Joseph Adde
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/16/2023	Tag No RO-FIT-2105
	Manufacturer E + H	Model # 5W4C1F-AAELHP2DHA1SGA+AACBI7Z1	Serial # T6105319000	Process 3rd Stage Blocks Inlet Flow
	Engineering Units gpm	Range 0 700		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP


Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	3.98 mA	0 gpm
25%	8 mA	175 gpm	7.98 mA	174.9 gpm
50%	12 mA	350 gpm	11.98 mA	350 gpm
75%	16 mA	525 gpm	15.98 mA	524.9 gpm
100%	20 mA	700 gpm	19.97 mA	699.8 gpm

Calibrated by: *[Signature]*
Date: 12/6/23

Owner's Representative: *[Signature]*
Date: 12/6/23

Instrument Calibration Sheet (Analog)				
	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-FIT-3105
	Manufacturer E + H	Model # 5W4C1F-AAELHP2DHA1SGA+AACBI7Z1	Serial # T6105419000	Process 3rd Stage Blocks Inlet Flow
	Engineering Units gpm	Range 0 700		

Installation verified by: G.A. Termination verified by: G.A. Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 gpm	4.02 mA	0.1 gpm
25%	8 mA	175 gpm	7.99 mA	175.1 gpm
50%	12 mA	350 gpm	12.01 mA	350.1 gpm
75%	16 mA	525 gpm	15.99 mA	525.1 gpm
100%	20 mA	700 gpm	20.01 mA	700 gpm

Calibrated by: Ronald Ashkin
Date: 12/6/23

Owner's Representative: [Signature]
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 8/16/2023	Tag No RO-PIT-2200
	Manufacturer Rosemount	Model # 3051CG4A22A1AB4M5Q4	Serial # 22SHPG0326308	Process RO Train 2 Pressure
	Engineering Units psi	Range 0 150		

Installation verified by: G. A.

Termination verified by: G. A.

Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5607006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	


Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 psi	4.01 mA	0 psi
25%	8 mA	37.5 psi	8.01 mA	37.51 psi
50%	12 mA	75 psi	12.01 mA	75.01 psi
75%	16 mA	112.5 psi	16.02 mA	112.51 psi
100%	20 mA	150 psi	20.01 mA	150.0 psi

Calibrated by: *[Signature]*
Date: 12/6/23

Owner's Representative: *[Signature]*
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-PIT-3200
	Manufacturer Rosemount	Model # 3051CG4A22A1AB4M5Q4	Serial # 225HPG0326309	Process RO Train 3 Pressure
	Engineering Units psi	Range 0 150		

Installation verified by: G.A.

Termination verified by: G.A.

Safety precautions verified by: RP

Test Equipment Used:			
MFR: FLUKE	MODEL: 789	SER #: 5507006	CAL DATE: 7/10/2023
MFR:	MODEL:	SER #:	CAL DATE:

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 psi	3.99 mA	0 psi
25%	8 mA	37.5 psi	7.98 mA	37.50 psi
50%	12 mA	75 psi	11.99 mA	75.01 psi
75%	16 mA	112.5 psi	15.98 mA	112.51 psi
100%	20 mA	150 psi	19.97 mA	149.9 psi

Calibrated by: *Handwritten Signature*
Date: 12/6/23

Owner's Representative: *Handwritten Signature*
Date: 12/6/23

Instrument Calibration Sheet (Analog)

	Job #/Location Arcadia WTP	Customer City of Santa Monica	Date 6/23/2023	Tag No RO-PIT-4200
	Manufacturer Rosemount	Model # 3051CG4A22A1AB4M5Q4	Serial # J22-31788499-001	Process RO Train 4 Pressure
	Engineering Units psi	Range 0 150		

Installation verified by: G. A.

Termination verified by: G. A.

Safety precautions verified by: RP

Test Equipment Used:							
MFR:	FLUKE	MODEL:	789	SER #:	5507006	CAL DATE:	7/10/2023
MFR:		MODEL:		SER #:		CAL DATE:	

Notes/Comments:

Test Range	Expected Current	Expected EU	Measured Current	Measured Engineering Units
0%	4 mA	0 psi	4.02 mA	0 psi
25%	8 mA	37.5 psi	8.01 mA	37.49 psi
50%	12 mA	75 psi	12.02 mA	75.01 psi
75%	16 mA	112.5 psi	16.02 mA	112.49 psi
100%	20 mA	150 psi	20.01 mA	150.0 psi

Calibrated by: *[Signature]*
Date: 12/6/23

Owner's Representative: *[Signature]*
Date: 12/6/23

This page intentionally left blank.



Appendix G: Exhibit 6 Performance Parameters



Exhibit 6

Performance Parameters

EXHIBIT 6

ARCADIA WATER TREATMENT PLANT TESTING AND PERFORMANCE REQUIREMENTS

1 PURPOSE

The purpose of this document is to outline required start-up and commissioning plans, functional tests (pre-commissioning testing), acceptance tests, and system performance guarantees for the expanded Arcadia Water Treatment Plant (WTP). Testing requirements are specific to the following new and modified unit processes:

1. Ultraviolet Advanced Oxidation Process (UV-AOP)
2. Granular Activated Carbon (GAC) system
3. Flow Reversal Reverse Osmosis (RO)
4. Decarbonation Tower (or Air Stripping Tower)

The Design/Builder shall demonstrate that the Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project (Project) meets all Guaranteed Plant Performance Parameters (Section 6, below), which constitutes a performance guarantee. This document generally sets forth the requirements for Start-up and Commissioning, Acceptance Testing, and Performance Guarantees of the Project required under the Contract Documents. This document is intended to supplement the project technical specification requirements but take precedence over technical specification sections.

2 REGULATORY APPROVALS

The Design/Builder shall meet all applicable requirements set forth by Governmental Agencies, having jurisdiction over the Project as they relate to any testing and acceptance procedures and reporting protocols for the Arcadia WTP. Design/Builder shall obtain the following approvals:

- State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW)
 - Drinking Water Permit Amendment
 - 97-005 Policy Memo/permit, including but not limited to the following documents to be submitted to DDW:
 - Step 4: Effective Treatment and Monitoring Report
 - Step 5: Human Health Risks Associated with Failure of Proposed Treatment Report
 - Final Engineering Report that addresses the design, multi-barrier treatment approach, and treatment goals.
 - An Operations and Maintenance Manual for the new treatment facilities
 - A Water Quality Monitoring Plan
 - Acceptance Test Plan and Final Acceptance Test Report(s) to demonstrate the performance of the new treatment processes.
 - These reports shall be provided in both PDF and MS Word formats.
- South Coast Air Quality Management District (SCAQMD)
 - Vapor-Phase GAC system permit amendments, if applicable
- City of Los Angeles Fire Department approvals
- City of Santa Monica Building Permits

3 START-UP AND COMMISSIONING PLAN

The Design/Builder shall submit a Start-Up and Commissioning Plan for approval by the City no later than six (6) months prior to starting Commissioning activities. The Design/Builder shall not start Commissioning activities without an approved Start-Up and Commissioning Plan. Refer to Specifications Section 01 45 20 for additional requirements.

The above referenced plans (collectively, "Plans") shall conform to the requirements of the Project Criteria, comply with the requirements outlined in this exhibit, and address the activities and Guaranteed Plant Performance Parameters for the Project and all equipment required to achieve the Project Criteria. For purposes herein, "Project Criteria" means: 1) restore the Olympic Sub-basin by pumping and treating the contaminated groundwater through a new advanced water treatment facility (approximately 2,000 gallons per minute of treatment capacity), 2) increase the treatment efficiency at the Arcadia Water Treatment Plant to 90 percent or greater and reduce waste discharge, 3) continue to provide City customers with a high-quality and safe drinking water supply, and 4) maximize local water supplies to reduce reliance on imported water supplies.

The Start-up and Commissioning Plan shall include, but not be limited to, the following:

- i. Schedule for mechanical and electrical completion, testing, and commissioning of equipment or system(s) applicable to the Project.
- ii. Scoped and approved piping and instrumentation diagrams ("P&IDs") identifying the limits of testing for each system and identifying all equipment, piping, instrumentation, and controls for each system.
- iii. Scoped and approved Single Line Diagrams showing the limits of testing and components of the electrical distribution system that will be required to be operational and active during the testing of the system components.
- iv. Approved point-to-point and loop drawings.
- v. Procedure/practice identifying the Design/Builder's plan for isolation of equipment prior, during, and after testing to assure the safety of the equipment, Design/Builder's personnel and its subcontractors, manufacturer's personnel, City employees, and others present. Procedure shall address as a minimum lockout/tagout and method of identifying status of equipment (construction, mechanically complete, in testing, energized/de-energized, etc.).
- vi. Roles and responsibilities of the Design-Build Start-up Manager; Design/Builder's testing, check-out, calibration, and other start-up personnel; Design/Builder's applicable Subcontractors; City Inspection, Operations and SCADA personnel; and Process Equipment Vendor personnel.
- vii. The Design/Builder shall provide and use forms for each stage of testing that include all test information for equipment and systems, including specified operational parameters. This includes providing forms for pressure or leakage testing and pre-operational check-out for all equipment.
- viii. Test procedure for equipment and systems.
 - a. Test procedures shall be prepared for each equipment and system installed by the Design/Builder.
 - b. The procedures shall be submitted at a minimum forty-five (45) days before testing activities begin.
 - c. The procedures shall be approved by City no less than fourteen (14) days before testing activities begin.

- d. The procedures shall include all test information to be collected, including specified operational parameters, during testing.
- ix. Calibration procedures.
- x. Sample calibration sheet for all types of instruments consistent with specifications.
- xi. Hydrotest test record form.
- xii. Electrical and Control sheets in accordance with specifications.
- xiii. Mechanical and electrical completion sign-off forms for each type of equipment installed by the Design/Builder on this contract.
- xiv. Start-up and Commissioning schedules; both to be included in the Construction Schedule (**Exhibit "3"** to the GMP Amendment).

3.1 START-UP AND COMMISSIONING

Refer to Specifications Section 01 45 20 for specific start-up and commissioning requirements. In general, start-up and commissioning activities shall consist of the following:

- i. Pressure and/or leakage tests.
- ii. Electrical testing as specified in Division 26.
- iii. Wiring and piping, individual component, loop, loop commissioning and tuning testing as described in Division 40.
- iv. Pre-operational checkout for all mechanical and HVAC equipment. Pre-operational check-out procedures shall be reviewed and approved by the respective equipment manufacturers.
- v. Initial operation tests of all mechanical, electrical, HVAC, and instrumentation equipment and systems to demonstrate compliance with the performance requirements of this project manual.

3.2 PRE-COMMISSIONING AND FUNCTIONAL TESTING

3.2.1 General

- i. The primary activities for pre-commissioning and functional testing are construction, factory testing, component testing, stand-alone equipment testing, and documentation. The intent is to test isolated equipment and components for mechanical and electrical functionality prior to the introduction of process fluids.
- ii. Once all components in a system have been tested individually and all required deliverables have been approved for that system, the Design/Builder may proceed to Functional Testing (Specifications Section 01 45 20) of that system.

3.2.2 Pre-commissioning Testing Requirements

- i. The Design/Builder shall verify installation in compliance with the Project Specifications and the manufacturer's installation instructions.
- ii. The Design/Builder shall perform required alignment, adjustment, lubrication, and all other steps required, for each item of equipment and systems furnished by the Design/Builder in accordance with the manufacturer's instructions, the equipment section, and sections referenced within the equipment section.
- iii. System Pressure and/or Leakage Tests in accordance with Project Specifications
- iv. Electrical and controls testing shall be successfully completed in accordance with Project Specifications.

- v. The Design/Builder shall provide mechanical and electrical completion sign-off forms for each item of equipment (as required) and systems installed by the Design/Builder. The forms will be used in the field by the Design/Builder and the City jointly, to verify that all steps required for mechanical and electrical completion have been performed. The Design/Builder shall not begin pre-operational check-out of equipment or systems until the Design/Builder's Design Professional (Brown and Caldwell) has reviewed and signed the mechanical and electrical completion sign-off forms for the equipment or system.
- vi. Installation and mechanical and electrical completion deficiency items shall be resolved to the satisfaction of the Design/Builder's Design Professional before preoperational check-out procedures are performed. A detailed list of corrective actions taken will be maintained by Design/Builder.
- vii. Pre-operation check-out shall be performed by the Design/Builder in a logical, stepwise sequence to ensure that all equipment has been properly serviced, aligned, connected, and adjusted prior to operation.
- viii. Pre-operation checkout procedures conducted by Design/Builder shall include, but not necessarily be limited to, the following:
 - a. Ring-out of all power, control, and monitoring and control circuits prior to connection.
 - b. Insulation resistance testing of all electrical equipment and cable.
 - c. Voltage check of all circuits.
 - d. Phase sequence check.
 - e. Pre-Connection alignment check of all connecting pipelines and machines.
 - f. Complete check-out, through simulated operating conditions, of all safety circuits and control interlocks.
 - g. Alignment of all motor and equipment shafts.
 - h. Manual rotation and/or movement of all moving parts to ensure freedom of movement.
 - i. Bump motor to confirm correct direction of rotation. Any anti-rotation device shall be removed prior to bumping motor.
 - j. Operation of motorized valves through complete open/close cycle with motor.
 - k. Confirmation that all valves are correctly orientated and in their correct operating mode.
 - l. All equipment and installation meet all Cal/OSHA requirements including, but not limited to, Process Safety Management.
- ix. Calibration
 - a. Before conducting the tests specified herein, the Design/Builder shall furnish the services of technicians knowledgeable of the process instrumentation, all special tools, calibration equipment, and labor to calibrate and test all Design/Builder-furnished process instruments and the control system. All test equipment shall be calibrated to a NIST Standard within 90 days of test.
 - b. All instruments, meters, flow control devices, and transmitters shall be calibrated to within manufacturer's specifications of accuracy. All status and alarm switches, transmitters, and indicators shall also be tested.

- c. During the tests, if one or more instrument readings are not within the specified calibration requirements, or the control system does not function as specified, adjustments or alterations shall be made by the Design/Builder as necessary to meet the intent of the specifications and the completion tests shall be repeated.
- x. Testing of Equipment
 - a. Once all affected equipment has been subjected to the required preoperational check-out and calibration procedures, individual equipment and systems shall be started, operated, and tested by the Design/Builder to determine whether the equipment and systems meet the requirements of the approved equipment operation procedures and specification requirements, including the entire operational range specified and required as a part of the Project Criteria (if operational range is available from the City). The equipment shall be operated by the Design/Builder for the period of time as defined in the approved procedures. Local control panel operation shall be confirmed during the associated equipment operational tests.
 - b. Once tests have been satisfactorily completed, all Design/Builder-furnished equipment shall be rechecked by the Design/Builder for proper alignment, loose connections, unusual movement, or other indications of improper operating characteristics. Any deficiencies shall be corrected to the complete satisfaction of the Design/Builder's Design Professional.
 - c. In the event that any item of installed equipment exhibits operating characteristics outside of the manufacturer's or the Design/Builder's technical specifications, it shall be disassembled, inspected, repaired, or removed from the site and replaced at no cost to the City, by the Design/Builder.

3.2.3 Pre-Commissioning Reports

Pre-Commissioning Testing includes completion and submittal of the following:

- i. All Factory Demonstration Test (FDT) Reports
- ii. All Pressure Test Reports
- iii. All Structures Leak Test Reports
- iv. All Mechanical Alignment Reports
- v. All Equipment Tested as Stand-Alone in Local / Manual Mode
- vi. All Loop Test Reports
- vii. All Conductivity and Megger Test Reports
- viii. All Instrumentation Calibration Reports
- ix. All Manufacturer's Certificates of Proper Installation (COPI)
- x. All Electrical Breaker Setting and Equip Check Out Reports
- xi. All PLC / HMI Programming Bench Tested
- xii. Draft Operator Training Plan Submitted
- xiii. Draft Standard Operating Procedures Submitted
- xiv. Draft O&M Manuals Submitted
- xv. Pre-Commissioning Report including CAR (Corrective Action Report)

3.3 COMMISSIONING TESTING REQUIREMENTS

3.3.1 GENERAL REQUIREMENTS

The following general requirements apply:

- i. The Design/Builder shall be responsible for the performance of all Design/Builder-furnished equipment in accordance with the Project Specifications.
- ii. The Design/Builder shall bear the cost of retesting work which fails to meet Guaranteed Plant Performance Parameters.

3.3.2 NOTICE OF COMMENCEMENT OF THE COMMISSIONING TESTS

The Design/Builder shall provide the City with at least fourteen (14) days prior written notice of the expected initiation of the Commissioning Tests. At least ten (10) days prior to the actual commencement of Acceptance Testing, the Design/Builder shall certify in writing that it is ready to begin Acceptance Testing in accordance with the Acceptance Test Plan and the Design Build Contract.

3.3.3 FUNCTIONAL TESTING REQUIREMENTS

The objective of the functional testing is to operate (Design/Builder with City Operations assistance) all WTP equipment to assess if the WTP equipment functions as stated in the control strategies. The process and mechanical equipment shall function without leaks, breakdowns, or failures for five (5) days straight. Process equipment and analyzers shall be inspected for calibration before the 5-day test.

The remaining PLC interlocks, control loops and alarms shall be checked before beginning the 5-day test. The 5-day test shall not start until all process equipment is installed and ready to test. Vendor system suppliers, manufacturers, and system integrators shall provide operational training prior to or during functional testing for Design/Builder and City staff.

3.3.4 FUNCTIONAL TESTING REPORT & CORRECTIONS

After completion of the 5-day test, the Design/Builder's Design Professional shall be provided the list of alarms, any mechanical or electrical failures and corresponding downtimes. Any system integration activities necessary to rectify those failures should be incorporated prior to the Acceptance Test.

3.3.5 CONDITIONS TO COMMENCEMENT OF THE ACCEPTANCE TESTS

The Design/Builder shall not commence the Acceptance Tests until the following events have occurred:

- i. The requirements of Pre-Commissioning and Functional Testing have been met and the City has approved the Acceptance Test plan
- ii. DDW has approved the Acceptance Test Plan proposed by the Design/Builder
- iii. The Design/Builder has submitted its personnel training program required by the Design Build Contract
- iv. The Design/Builder has certified that it has completed the Pre-Commissioning and Functional Testing requirements
- v. The Design/Builder shall have completed all startup and commissioning required by the Design Build Contract, including testing of equipment, subsystems, and structures required by the Design Build Contract and the Design Requirements

- vi. The Design/Builder shall have devised a method acceptable to the City and applicable Governmental and Regulatory Bodies, and complying with Applicable Law for:
 - a. Determining that effluent water quality is in compliance with all Applicable Laws; and
 - b. Disposing or retreating any water which is not in compliance with all Applicable Laws.

4 RO MEMBRANE BENEFICIAL OCCUPANCY

Upon completion of functional testing, and prior to acceptance testing per an approved Acceptance Test Plan, the Design/Builder shall operate the RO system in conventional RO mode (flow reversal mode disabled) at the current RO system recovery (82-83% recovery) to demonstrate that the new RO membranes are operating under applicable membrane warranty conditions and meeting all applicable performance requirements per Project specifications. The timing of when the new RO membranes are installed and duration that it would be operated under the current RO system recovery (82-83% recovery) in relation to when the Acceptance Testing will begin is the sole responsibility of the Design/Builder. The following data and activities shall be collected and undertaken during the Beneficial Occupancy demonstration:

- i. Raw water silt density index (SDI) testing
- ii. Baseline normalization calculations
- iii. Comparison of performance data to membrane projection models
- iv. Conduct conductivity profile to confirm the membrane elements are performing per specifications
- v. Determine system compliance with membrane warranty parameters:
 - a. Feedwater water quality
 - b. Feedwater SDI
 - c. Feed pressure
 - d. Interstage differential pressures

The Design/Builder shall troubleshoot the RO system (evaluate upstream feedwater quality issues, perform membrane pressure vessel conductivity profiles, check system controls, adjust operational setpoints, etc.) and repeat system tests if the membrane system fails to meet performance requirements. Upon successful completion of Beneficial Occupancy demonstration testing, the Design/Builder shall submit all testing data, which demonstrates RO membrane system performance compliance, and the membrane warranty period shall begin.

5 ACCEPTANCE TEST PLAN

The Design/Builder shall submit an Acceptance Test Plan for approval by the City, and to serve as part of the DDW permitting process, no later than six (6) months prior to commissioning activities. The City shall have fifteen (15) days to review and approve the Design/Builder's Acceptance Test Plan or return with comments, which will be responded to by the Design/Builder within ten (10) days. The Design/Builder shall not submit the final Acceptance Test Plan to DDW until it has been reviewed and approved by the City.

The Design/Builder shall prepare and submit to the City and DDW for its review and approval an Acceptance Test Plan that includes the following minimum requirements:

- i. UV/AOP performance test protocol, including spiking of 1,4 Dioxane and other constituents to demonstrate performance to the City and DDW. Refer to Specification Section 46 63 23 for validation testing requirements.
- ii. GAC system performance (backwash/bumping functionality, flow splitting, peroxide quenching, clean bed headloss, and EBCT compliance).
- iii. RO performance test protocol, including:
 - a. Raw water silt density index (SDI) testing
 - b. Conductivity profile testing
 - c. Baseline normalization calculations
 - d. System compliance with membrane warranty parameters (feedwater water quality, SDI, etc.)
- iv. Operations, Maintenance and Monitoring Plan (OMMP), as submitted to the City and DDW.
- v. Procedures for testing all new water treatment processes and ancillary support systems.
- vi. Procedures for testing standby power.
- vii. Use of permanent and temporary instrumentation.
- viii. Organization of the test team, including responsibilities, authority, and decision-making protocols.
- ix. Response procedures for unsuccessful test results including definition of threshold results that constitute overall Acceptance Test failure.
- x. Operating and maintenance schedule during testing.
- xi. Procedures for UV/AOP off-spec water disposal and system protections.
- xii. Procedures for RO system off-spec water disposal and system protections.
- xiii. Internal and external communications protocols.
- xiv. Acceptance Testing schedule.
- xv. Procedures for demonstrating compliance with every Acceptance Test Standard.
- xvi. Response or mitigation procedures in the event of an unsuccessful test event.

The Acceptance Test Plan shall describe methods for demonstrating compliance with Guaranteed Plant Performance Parameters, including:

- i. A list of all WTP influent water, inter-process (i.e. UV-AOP effluent, GAC effluent, RO Feed, RO permeate), and effluent water quality, performance parameters to be monitored and a schedule of monitoring. The monitoring description will include sampling locations, analytical methods and sampling frequencies at which water quality and parameters will be monitored on a continuous or other defined basis. Final sampling and performance requirements shall be approved by DDW. All water quality and performance parameters shall be sampled for and measured daily during the Initial 7-day DDW Acceptance test and at regular sampling intervals, per permitting requirements, during the 30-Day testing. Sampling for 1,4-dioxane should be across the entire water treatment train or as required by DDW.
- ii. Procedures for spiking contaminants (e.g., 1,4-Dioxane, TCE, and PCE) to test UV AOP system per Specification Section 46 63 23.

- iii. Identification of equipment calibrations to be performed, descriptions of all calibration techniques to be used and timing of calibrations relative to Acceptance Testing (all instruments, including benchtop units, used in Acceptance Testing operations and to monitor and evaluate Acceptance Testing shall be calibrated in accordance with manufacturer's requirements.), QA/QC procedures, including those to be utilized for all equipment used for testing and measuring different parameters within the treatment process and at contract laboratories.
- iv. Identification of QA/QC procedures, including, trip blanks and duplicates for samples sent to contract laboratories. The description shall address intermediate spot and cross checks, in addition to the formal calibration periods.
- v. A full description of any analytical methods and techniques that will be utilized to verify compliance with all Applicable Laws and Guaranteed Plant Performance Parameters. In addition, descriptions of how data collected will be compared with Guaranteed Plant Performance Parameters shall be provided and shall be in a manner that complies with City requirements and regulatory requirements including applicable data handling requirements of the DDW. Provide examples of any tools such as flow charts, check sheets or any other data presentation and evaluation techniques that will be utilized.
- vi. Compliance with all laboratory water quality testing and analysis.
- vii. A listing of all samples requested by the City and a protocol for delivering samples to the City for the City's own testing program should the City elect to have such a program during Acceptance Testing.
- viii. For RO membrane separation process, a description of membrane normalization calculations to verify performance stability.
- ix. A list of critical control points for the UV-AOP process to demonstrate required log removal credit and treatment performance.
- x. A full description of any analytical methods and techniques that will be used to verify compliance. In addition, descriptions of how data collected will be compared with performance parameters shall be provided and shall be in a manner that complies with City requirements and regulatory requirements including applicable data handling requirements of DDW.
- xi. Supervisory Control and Data Acquisition (SCADA) system monitoring and control functions.
- xii. A list of real-time data fields that will be provided to the City during Acceptance Testing.

The Acceptance Test Plan shall also specify the form and contents of the Acceptance Test Report and include specific, detailed sampling protocols to be used while conducting the Acceptance Tests. Preliminary tests may be conducted at the Design/Builder's expense; however, the results of such tests shall not be made part of the Acceptance Test Report.

The Acceptance Test Plan shall describe the Design/Builder's approach and details for meeting the requirements of this document.

The Acceptance Test Plan shall document how Acceptance Testing will demonstrate the ability of the Arcadia WTP to treat the design range of flow, temperature, and influent water quality.

Draft Standard Operating Procedures (SOP) shall be submitted prior to, or in conjunction with, the submittal of the Acceptance test plan for use during testing activities. Final SOPs shall be submitted to the City after Substantial Completion but prior to Final Completion.

5.1 ACCEPTANCE TESTING

Refer to Specifications Section 01 45 20 for specific acceptance test requirements, which will consist of the following:

- i. Initial 7-days DDW Acceptance - The Initial 7-days DDW Acceptance Test shall have a minimum duration of seven (7) consecutive days and shall demonstrate that all water treatment plant operations over the Initial 7-days DDW Acceptance Test period are in full and continuous compliance with the Guaranteed Plant Performance Parameters. It is expected that during the Initial 7-days DDW Acceptance test, the final treated water will NOT be sent into the potable water distribution system and will be disposed of to either the sanitary sewer system or storm drain unless directed otherwise by DDW. The Design/Builder shall be responsible for providing all necessary temporary measures required to discharge the final treated water to either the sanitary sewer system or storm drain, or as directed by DDW. The operational testing period shall be for a period of seven (7) consecutive days at a minimum of half plant capacity (i.e., only two RO trains in operation) for the first two days and full plant capacity thereafter with a plan to alternate RO train operation, as needed, to test all RO trains and the UV-AOP system).
 - a. Design/Builder may reduce the duration of the Initial 7-days DDW Acceptance test, if allowed by DDW, to reduce the volume of water discharged to the sewer.
 - b. If the Initial 7-Days DDW Acceptance test is suspended for a period of more than eight (8) hours, and if a DDW approval has not been achieved, the "continuous compliance" requirement shall not be satisfied, and the Initial 7-days DDW Acceptance test shall be restarted at Day 1 and re-run for the entire 7-day test period.
 - c. Loss of power at the Arcadia WTP does not constitute a requirement to repeat Initial 7-days DDW Acceptance test. In such event, the testing duration would be paused during the loss of power event and resume once power is restored.
 - d. Stoppage of testing by the City to address issues unrelated to the Project performance will constitute a pause in testing but not constitute a requirement to repeat Initial 7-days DDW Acceptance test.
 - e. City will provide certified operators to operate new treatment facilities, including UV-AOP, RO System, Decarbonator, GAC and the Booster Pump Station under the direction of Design Builder. The Design/Builder will provide operation direction to the City Operators after the loading of new RO system membranes. Once Substantial Completion is reached the City will be responsible for all operations of the facility. Initial acceptance test is complete once DDW has approved water quality test results and issues either an amended drinking water permit or temporary permit to discharge water into the distribution system.
 - f. Upon completion of the Initial 7-days DDW Acceptance test and approval granted by DDW, the Final 30-days Continuous Operation Acceptance period shall commence.
- ii. Final 30-days Continuous Operation Acceptance - Upon completion of the Initial 7-days DDW Acceptance test and approval has been granted by DDW to commence Final 30-days Continuous Operations, the City will provide certified operators to

operate the Arcadia Water Treatment Plant with direction from the Design/Builder at full plant capacity (i.e., all RO trains operating) for an additional 30 days. It is expected that during the Final 30-days Continuous Operation Acceptance test period, the treated water will be sent into the drinking water distribution system unless directed otherwise by DDW. The primary objective of the Final 30-day Continuous Operation Acceptance period is to verify performance of the treatment system and to transition operational direction from the Design/Builder to the Owner.

5.2 SUPPLEMENTAL TESTING

In addition to Acceptance Testing, supplemental testing is to be conducted.

- i. Supplemental 30-days Continuous Operation - Upon completion of the Final 30-days Continuous Operation Acceptance testing period, testing is to be continued for 30 additional days. The primary objective of the Supplemental 30-days Continuous Operation period is to verify performance of the treatment of the RO systems for a total of 60 days. If the RO system is unable to operate for a minimum of 60-days without a clean-in-place (CIP), Design/Builder shall evaluate operational data and make a recommendation on operational adjustments and repeat both the Final 30-days Continuous Operation Acceptance and Supplemental 30-day Continuous Operation test periods for the RO system. Any remedy or operational adjustments made shall be approved by the City prior to restart of the Final 30-days Continuous Operation Acceptance test. Failure of City operations staff to adhere to, or follow, Design-Build team directions for WTP operations, unexpected plant power failures, or the occurrence of well field upsets that introduce unexpected solids into the WTP, all of which may result in RO system fouling/scaling, shall not be the responsibility of the Design/Builder and shall not result in restarting the Final 30-days Continuous Operation Acceptance and Supplemental 30-day Continuous Operation testing periods.

5.3 ACCEPTANCE TEST REPORT

Within thirty (30) days following the last day of any Acceptance Testing, the Design/Builder shall furnish the City with two (2) copies of a written Acceptance Test report consistent with the requirements specified in this document, by the Design/Builder.

5.3.1 ACCEPTANCE TEST REPORTING REQUIREMENTS

The Acceptance Testing Report shall be prepared in accordance with the Acceptance Test Plan and include at a minimum:

- i. Confirmation by the testing lab and Engineer of Record that testing was conducted in accordance with the approved Acceptance Test Plan.
- ii. A certification of the results of the testing with respect to each of the Acceptance Test Standards. Each Acceptance Test Standard shall be addressed separately and the basis for the determination presented. This certification of the results of the testing shall include (a) a determination of the extent to which the Project complies with the applicable Contract Standards and requirements and (b) for each Guaranteed Plant Performance Parameter, a determination of the extent to which the Project complies with the Guaranteed Plant Performance Parameters.
- iii. All data measured and recorded during the tests including laboratory analyses, chemical consumption, instrument calibrations, pressures, and measurements.

- iv. A certification of the results of the testing with respect to the log removal value for 1,4-dioxane, TCE and PCE by the UV/AOP process.
- v. Certification of RO recovery performance and Arcadia WTP final potable water quality.
- vi. Record of equipment outages, failures, and preventative maintenance.
- vii. Summary of test results and conclusive evidence of compliance with all test requirements.
- viii. All calculations used in determining test results.
- ix. Any other data reasonably requested by the City to be included in such reports.
- x. All certifications shall be signed and sealed by an Engineer in responsible charge of the design employed by the Design/Builder.

5.3.2 ACCEPTANCE TEST STANDARDS

The ability of the Project to meet the following Acceptance Test Standards shall be demonstrated during Acceptance Testing:

- i. The Project operated properly with only the normal complement of employees included in the staffing related to collection and analysis of samples and other test data.
- ii. The Project can deliver Arcadia WTP treated water per the Guaranteed Plant Performance Parameters. For Guaranteed Plant Performance Parameters, the averaging period for the purposes of Acceptance Testing shall be the length of the Acceptance Test. The results of all samples taken during an Acceptance Test shall be reported and included in the calculation of reported averages or other evaluations applicable to determining compliance with Guaranteed Plant Performance Parameters.
- iii. The Project is compliant with all applicable Governmental Approvals at all times.
- iv. The Project operations are consistent with the Project Criteria.
- v. The Project operates with automated and computerized systems in full and continuous operation.

5.3.3 FAILURE OF THE ACCEPTANCE TEST

Failure to continuously demonstrate the Acceptance Test Standards during the period of the Acceptance Test as defined in Sections 5.1 shall constitute a failure of the Acceptance Test. Any failure of an Acceptance Test shall require (a) correction of those components or conditions that resulted in the failure, and (b) performance of a retest of the Acceptance Test after proper notification is provided to the City. Any failure to meet an Acceptance Test Standard during the Initial 7-days DDW Acceptance or Final 30-days Continuous Operations testing periods shall require a repeat of the Initial 7-days DDW Acceptance or Final 30-days Continuous Operations Acceptance testing periods. Corrective actions and/or remedies to the failure shall be approved by the City prior to repeating the Initial 7-days DDW Acceptance or Final 30-days Continuous Operations Acceptance testing periods.

5.3.4 ACCEPTANCE TEST COMPLETION

Completion of the Acceptance Test shall be defined as completion of Acceptance Testing followed by submission by the Design/Builder and acceptance by the City of an Acceptance Test report demonstrating compliance with all acceptance test standards.

6 GUARANTEED PLANT PERFORMANCE PARAMETERS

The expansion of the Arcadia WTP includes the retrofit of existing RO trains with flow reversal technology and the incorporation of an UV-AOP system for the treatment of contaminants from the Olympic wells. The following sections summarize performance requirements for these two processes during acceptance testing.

6.1 UV-AOP SYSTEM PERFORMANCE GUARANTEE

The UV-AOP System includes a UV reactor(s) and hydrogen peroxide chemical feed system in addition to downstream GAC for hydrogen peroxide quenching. The proposed TrojanUVFlex UV-AOP System will treat Olympic wellfield water for 1,4-dioxane (primary treatment requirement) per the UV-AOP performance requirements, summarized in Table 1, in addition to other VOCs listed in Table 2. Not all constituents will be reduced by the oxidation process.

Table 1. UV-AOP System Performance Criteria		
Parameter	Unit	Value
Design feed water 1,4-dioxane concentration	µg/L	54
Design treated water 1,4-dioxane concentration	µg/L	0.2
Design 1,4-dioxane removal	N/A	≥2.4 log
Design feed water TCE concentration	µg/L	34
Design treated water TCE concentration	µg/L	0.2
Design TCE removal	N/A	≥2.2 log
Design feed water PCE concentration	µg/L	42
Design treated water PCE concentration	µg/L	0.2
Design PCE removal	N/A	≥2.3 log
Total flow		2,000 gpm
UVT		≥96%
UV system power (kW)		329
Hydrogen peroxide dose		≤40 mg/L

Sampling and testing of the raw water for the constituents and parameters listed in Table 1 will be accomplished at the frequencies and times required by DDW. Should the initial laboratory test results indicate any deviation from either the treatment or raw water quality objectives specified herein, the effluent and raw water will be retested to confirm the anomalies before any remedial actions are undertaken.

If water quality operating conditions fall outside of the parameters noted in Table 2, the Design/Builder shall take such steps as may be necessary to ensure that the 1,4-dioxane levels are below the applicable regulatory levels. Refer to Table 2 for UV-AOP baseline water quality parameters.

6.1.1 BASELINE WATER QUALITY PARAMETERS

Table 2 summarizes raw water quality in the Olympic source from the 97-005 Permit Step 2 report and the treatment objectives for inorganic contaminants. Given the variable nature of

source water quality, this data should be considered indicative of feed water quality to the process and that final treated water quality will meet all applicable drinking water standards after the entire treatment process.

Table 2. Olympic Well Water Quality – Step 2 Report					
Constituent [Units]	MCL or NL	Using UCL95 ^a		Using Production Well Concentration From 2020 ^b	
		Olympic Influent Concentrations Estimates	With Safety Factor Applied ^c	Olympic Influent Concentrations Estimates	With Safety Factor Applied ^c
1,1-Dichloroethane (1,1-DCA) [ug/L]	5	0.11	0.17	0.098	0.15
1,1,2-Trichloroethane (1,1,2-TCA) [ug/L]	5	0.094	0.14	ND	ND
1,1-Dichloroethane (1,1-DCE) [ug/L]	6	0.47	0.71	0.67	1.0
1,2,3-Trichloropropane (1,2,3-TCP) [ug/L]	0.005	0.022	0.026	0.00091	0.0011
1,2-Dichloroethane (1,2-DCA) [ug/L]	0.5	0.043	0.065	ND	ND
1,4-Dioxane [ug/L]	1	13.8	20.7	9.9	14.9
Benzene [ug/L]	1	0.037	0.056	ND	ND
Carbon Tetrachloride (CTC) [ug/L]	0.5	0.15	0.23	0.098	0.15
Cis-1,2-Dichloroethene (cis-1,2-DCE) [ug/L]	6	0.84	1.26	0.23	0.35
Methyl tert-butyl ether (MTBE) [ug/L]	13	0.11	0.17	ND	ND
PFOA [ng/L]	5.1	0.44	0.66	1.2	1.8
Tetrachloroethene (PCE) [ug/L]	5	10.4	15.6	31	46.5
Trans-1,2-Dichloroethene (trans-1,2-DCE) [ug/L]	10	0.026	0.039	ND	ND
Trichloroethene (TCE) [ug/L]	5	8.2	12.3	23	34.5
Vinyl Chloride [ug/L]	0.5	0.028	0.042	ND	ND

a. From production wells concentration estimates

b. Maximum observed values from production wells from available 2020 sampling data

c. A safety factor of 1.5 was applied for each constituent, except for 1,2,3-TCP, which used a safety factor of 1.2.

6.1.2 GAC System Guarantees

The GAC system shall be guaranteed to operate at prescribed headloss conditions as outlined in Specification Section 44 31 16. The Design/Builder shall ensure that the GAC backwash/bumping system and flow control systems are operating per the design criteria. Specific performance guarantees include:

- i. GAC system effluent shall contain no measurable hydrogen peroxide residual based on a feed hydrogen peroxide concentration of less than or equal to 40 mg/L. Measurable Hydrogen Peroxide is defined as 0.5 ppm.
- ii. Empty Bed Contact Time (EBCT) shall be greater than 5 mins and loading rate shall not exceed 5.9 gpm/sf at the max design flow of 2.9 mgd.
- iii. Failure to meet effluent residual requirements will result in the Design/Builder adding additional media to each pressure vessel.

6.2 RO SYSTEM PERFORMANCE GUARANTEE

The Arcadia WTP expansion will include the retrofit of all four existing RO trains with ROTEC flow reversal RO technology to increase recovery for greater potable water production. The retrofitted skids shall be operated under the following conditions:

- i. Recovery:
 - a. Operating Range: 1,758 to 1,814 gpm of feed flow per train at 90 percent recovery
 - b. Minimum: 1,650 gpm of feed flow per train at 90 percent recovery
 - c. Maximum: 1,900 gpm of feed flow per train at 90 percent recovery
- ii. CIP Frequency shall be no more frequent than every 2 months. A CIP shall be triggered by any one of the following conditions:
 - a. Increase of normalized feed pressure $\geq 15\%$
 - b. Decline of normalized permeate flow rate $\geq 15\%$
 - c. Decline of normalized specific flux $\geq 15\%$
 - d. Increase of normalized salt passage $\geq 15\%$
- iii. Feed water quality parameters shall be as listed herein, with feed water pH adjusted with 93% weight per weight sulfuric acid and conditioned with antiscalant.
 - a. Feed water adjusted pH of 6.6 minimum
 - b. Antiscalant chemical addition shall be from one of the following:
 - 1) Avista Vitec-4000 = 3.5 mg/L maximum
 - 2) AWC A-119 = 1.2 mg/L maximum

Refer to Specifications Section 46 63 23, Reverse Osmosis Membrane System for additional RO system requirements, including membrane supplier requirements.

Feed water quality to the RO System shall be within reasonable values based on City's historical well water quality, dating from January 1, 2011, through the beginning of Acceptance Testing. Feed water quality to the RO System, prior to chemical pretreatment, measured during Acceptance Testing and Supplemental Testing exceeding the maximum values listed within Specifications Section 46 63 23 shall be reviewed and verified by the City. If verified, Design/Builder shall evaluate feed water quality data and make recommendations on operational adjustments to the RO system. Any remedy or operational adjustments requiring

restarting the Final 30-Day Continuous Operations Acceptance test period shall be approved by the City prior to restart of the Final 30-Day Continuous Operations Acceptance test.

Per Specification Section 46 63 23, after the completion of the installation and adjustment of the system, Design/Builder shall carry out on each individual part of the system and on the complete system such tests and in such number of test runs, as agreed in test procedures, to determine whether the system complies with the performance criteria.

6.2.1 Decarbonator System Guarantees

The new decarbonator system (third tower) shall be guaranteed to operate at prescribed headloss conditions as outlined in Specification Section 46 63 75. The Design/Builder shall ensure that the decarbonator is operating per the design criteria, including a maximum hydraulic loading rate of 29.6 gpm/sf and a feed flow rate of 2,800 gpm. Specific performance guarantee includes:

- i. Decarbonator effluent carbon dioxide concentration shall be no greater than 12 mg/L.

The Design/Builder shall measure the total VOC load exiting the entire decarbonator system at full WTP flow (after acceptance testing) to determine if the South Coast AQMD permit for gas phase VOC treatment is still required (greater than 1 pound per day VOCs).

6.3 Arcadia WTP Guaranteed Plant Performance Parameters

Table 3 summarizes overall Arcadia WTP organics treated water quality requirements.

Table 3. Arcadia WTP Organic Treated Water Quality Performance Parameters				
Parameter	Proposed WTP Effluent Goal (µg/L)	MCL/NL (mg/L)	Treated Water Concentration Fraction of MCL/NL ^a	
			Initial	Ultimate
1,4-Dioxane	<0.5	0.001	0%	0%
TCE	<0.5	0.005	0%	0%
PCE	<0.5	0.005	0%	0%
1,2,3-TCP	No change	0.000005	0%	0%
1,1-DCE	<0.5	0.006	0%	0%
1,1-DCA	No change	0.005	0%	0%
Cis-1,2-DCE	<0.5	0.006	0%	0%
Carbon Tetrachloride	No change	0.005	0%	0%
PFOA [ng/L]	No change	5.1	0%	0%
1,1,2-Trichloroethane [µg/L]	No change	5	0%	0%
1,2-Dichloroethane [µg/L]	No change	0.5	0%	0%
Benzene [µg/L]	No change	1	0%	0%
Methyl tert-butyl ether (MTBE) [µg/L]	No change	13	0%	0%
trans-1,2-Dichloroethene [µg/L]	No change	10	0%	0%
Vinyl Chloride [µg/L]	No change	0.5	0%	0%

a. Values below the MDL or MRL are considered zero for calculation purposes

The overall Arcadia WTP shall meet design production based on the current available raw water supply at the time of Start-up and Commissioning. Table 4 summarizes overall Arcadia WTP inorganics treated water quality requirements. The treated water from the Arcadia WTP shall meet all federal and State of California drinking water standards (e.g., MCL, sMCL, and NL).

Table 4. Arcadia WTP Inorganic Treated Water Quality Performance Parameters		
	Average Treated Water Quality	NL, MCL, or sMCL
Flow, Ultimate (gpm)	7,030	-
pH	8.3	6.5-8.5
Temperature (°C)	20	-
Total Dissolved Solids (TDS) (mg/L)	367	500
Alkalinity (mg/L as CaCO ₃)	97	-
Hardness (mg/L as CaCO ₃)	165	-
Aluminum, Total (mg/L)	0.0014	0.2
Copper (mg/L)	ND	1.0
Barium (mg/L)	0.02	1.0
Calcium (mg/L)	39.3	-
Iron, Total (mg/L)	0.01	0.3 (dissolved)
Lead (mg/L)	ND	0.015
Magnesium, Total (mg/L)	16	-
Manganese (mg/L)	0.01	0.05
Potassium (mg/L)	0.85	-
Arsenic (mg/L)	ND	0.010
Chloride (mg/L)	37.8	250
Fluoride (mg/L)	0.10	2.0
Sulfate (mg/L)	101	250
Nitrate (mg/L as N)	0.1	10
Selenium (µg/L)	ND	0.05
Silica (mg/L)	12	-

System performance shall meet all individual unit process guarantees outlined within this document and shall result in a finished water quality that meets all applicable DDW drinking water standards:

- i. Inorganic chemicals in 22 CCR Table 64431-A(1) ≤ MCLs
- ii. Radionuclide chemicals in 22 CCR Tables 64442 and 64443 ≤ MCLs
- iii. Organic chemicals in 22 CCR 64444-A ≤ MCLs
- iv. Disinfection byproducts in 22 CFR Table 64533-A ≤ MCLs
- v. Lead and copper ≤ action levels per 22 CFR §64678

- vi. Secondary Drinking Water Standards 22 CCR Table 64449-A ≤ SMCLs
- vii. All compounds with notification levels (NL) should be monitored

Major treated water quality requirements are summarized in Table 5.

Table 5. Arcadia WTP Major Effluent Water Quality Performance Parameters			
Parameter^a	Target Value	Range	Units
pH	8.3	8.0 to 8.5	Units
TDS (Final Effluent)	400	350 to 500	mg/L
TDS (RO Permeate)	< 120	-	mg/L
Turbidity	<0.2	0.1 to 0.2	NTU
Alkalinity	100	75 to 150	mg/L (as CaCO ₃)
Fluoride	1.0	0.5 to 1.0	mg/L
LSI	1.0	1.0 to 1.5	-
CCPP	0.5	1 to 3	mg/L as CaCO ₃

a. Samples will be collected, and data will be provided to the City for pH, temperature, calcium, alkalinity, and TDS that is used to calculate LSI and CCPP.

This page intentionally left blank.



Appendix H: Trojan UV-AOP Performance Test Report



**The City of Santa Monica
Arcadia Water Treatment Plant Expansion**

TrojanUVFlex200™ - Advanced Oxidation System

Performance Test Report

December 21, 2023

Contents

1	INTRODUCTION/BACKGROUND.....	2
2	OBJECTIVES.....	2
3	UV-OXIDATION FUNDAMENTALS.....	3
3.1	Treatment Mechanisms	3
3.2	Water Quality Parameters	4
UV Transmittance	4	4
Hydroxyl Radical Scavenging Demand	4	4
3.3	Trojan UV/H₂O₂ System controls	6
4	METHOD	8
4.1	Experimental Set up.....	8
UVT Modifier, Hydrogen Peroxide and Contaminant Dosing.....	8	8
Achievement of Steady State Operation.....	9	9
4.2	Test Procedure.....	9
Test Matrix	9	9
Sample Handling	10	10
UV Transmittance (UVT)	10	10
Hydrogen Peroxide.....	11	11
Hydroxyl Radical Scavenging Demand	11	11
1,4-Dioxane and Remaining Parameters	11	11
5	RESULTS	13
5.1	Mixing and Steady State.....	13
5.2	Water Quality	14
5.3	On-Site Data and Measurements	19
5.4	Target contaminant treatment.....	25
6	CONCLUSIONS & RECOMMENDATIONS.....	37
7	REFERENCES.....	39

1 INTRODUCTION/BACKGROUND

The City of Santa Monica has installed an ultraviolet/hydrogen peroxide (UV/H₂O₂) advanced oxidation process (AOP) system at the Arcadia Water Treatment Plant. This system will provide treatment of groundwater from the Olympic well field for 1,4-dioxane, trichloroethylene (TCE) and tetrachloroethylene (PCE) contamination. The system consists of two trains (1 duty+1 standby) of TrojanUVFlex200™ UV Advanced Oxidation Process (UV-AOP) chambers, along with a hydrogen peroxide (H₂O₂) dosing system. Each chamber contains 11 lamp sections, and each section is comprised of 24-1 kW Solo UV lamps.

Trojan Technologies, along with the Contractor (Walsh) and the designer (Brown and Caldwell), completed on-site performance testing of the UV-AOP system from September 22nd to October 5th, 2023. This report describes the methods, procedures and test conditions used during the performance testing and summarizes the test results based on the analytical data reported from third-party laboratories.

2 OBJECTIVES

The primary objective of TrojanUVFlex200 UV-AOP system performance testing was to verify that the installed UV system is capable of meeting the treatment criteria at the design operating conditions, as summarized in Table 2-1. A secondary objective was to provide a robust set of data demonstrating treatment up to 2.4, 2.2 and 2.3 log removal of 1,4-dioxane, TCE, and PCE, respectively, to determine the operating performance guidelines for review by the California Division of Drinking Water (DDW). The performance testing described herein is intended to provide data to demonstrate that the TrojanUVFlex200 automatic control program can control the system operation to reliably meet the contaminant treatment targets, not only at the design conditions, but also when the UVT is below the design value and when the flow per train is below the design value.

Table 2-1 summarizes the UV/H₂O₂ AOP system design criteria. The installed system includes two trains (1 duty + 1 standby) of single chamber TrojanUVFlex200™ reactors, each with 11 populated lamp sections (264 lamps per reactor). The one duty train will provide up to 2.4 log reduction of 1,4-dioxane, 2.2 log reduction of TCE and 2.3 log reduction of PCE from 2,000 gpm of 96% UVT water with up to 40 mg/L H₂O₂.

Table 2-1: Summary of UV-AOP Design Conditions.

Total Flow, GPM	2,000
Duty/Redundant Trains	1/1
Total System Power (kW)	329
1,4-Dioxane Influent concentration (ug/L)	54
1,4-Dioxane Effluent concentration (ug/L)	0.2
1,4-Dioxane Log ₁₀ Reduction	≥2.4
TCE Influent concentration (ug/L)	34
TCE Effluent concentration (ug/L)	0.2
TCE Log ₁₀ Reduction	≥2.2
PCE Influent concentration (ug/L)	42
PCE Effluent concentration (ug/L)	0.2
PCE Log ₁₀ Reduction	≥2.3
Nitrate Concentration (mg/L as N)	8.0
Minimum UV Transmittance at 254 nm, %	96
Design Hydroxyl Radical Scavenging Demand (s ⁻¹)	130,000
Design Maximum Influent [H ₂ O ₂] (mg/L)	40

3 UV-OXIDATION FUNDAMENTALS

3.1 TREATMENT MECHANISMS

UV light-based advanced oxidation processes (UV-AOPs) rely upon the simultaneous mechanisms of direct UV photolysis and hydroxyl radical-induced oxidation to degrade chemical contaminants in water. UV-photolysis is the process by which chemical bonds in the contaminant structures are broken by the energy associated with the UV light absorbed by those compounds. UV-photolysis does *not* require the addition of H₂O₂. A UV-AOP process in the presence of an oxidant (*e.g.*, H₂O₂) relies on the *in-situ* generation of hydroxyl radicals (•OH) through the UV-photolysis of H₂O₂ which is dosed to the water, and the subsequent oxidation of chemical contaminants initiated by hydroxyl radicals.

Hydrogen peroxide is commercially available as aqueous solutions of varying strength. It is a relatively weak absorber of UV light having a molar absorption coefficient at 254 nm of 19.6 L mol⁻¹ cm⁻¹. Nevertheless, the quantum yield of hydroxyl radical formation from hydrogen peroxide UV photolysis approaches unity. Therefore, the UV/H₂O₂ process is one of the most efficient advanced oxidation processes.

Hydroxyl radicals are extremely reactive, short lived and unselective transient species. Due to their high reactivity in natural waters, especially in the presence of naturally occurring organic matter (NOM) and alkalinity, these radicals will instantly react with the water constituents and do not exist beyond the boundaries of the UV reactor volume.

Hydroxyl radicals can oxidize organic and inorganic compounds by various types of reactions, comprising electron transfer, hydrogen abstraction and electrophilic addition reactions. In UV oxidation treatment processes, the yield of hydroxyl radicals is optimized based on the H₂O₂ required for a given contaminant treatment level for a given water quality, flow, and UV system operating conditions.

3.2 WATER QUALITY PARAMETERS

UV Transmittance

UV transmittance (UVT) is the spectral radiant power (P_{λ}) transmitted through a medium (*e.g.*, water sample) across a particular pathlength (l) divided by the spectral radiant power incident on the sample (P_{λ}^0). UVT is measured using a UV spectrophotometer. Reagent grade water is used to zero the instrument (*i.e.*, UVT = 100%). UV absorbance (A) at a given wavelength (λ) correlates to the amount of light absorbed by a solution over a given pathlength (l). UVT and UV absorbance are related through the following equation:

$$UVT(\lambda, \%) = 10^{-A(\lambda)} \times 100$$

The typical cell pathlength is 1 cm and both transmittance and absorbance values are commonly reported per cm. A key reference wavelength and one at which UVT is often reported is 254 nm, which is also the radiation emitted from the excited state of mercury atoms in the low-pressure mercury vapor arc lamps. UV Transmittance depends on the concentration of UV light-absorbing compounds and particles (which also scatter the light) present in the water matrix. The higher the water background UV absorption, the lower is the UV light availability to H₂O₂ for hydroxyl radical generation and to organic contaminants for the direct UV photolysis. The UV transmittance is one of the key water quality parameters used in the UV equipment sizing for a given application.

Hydroxyl Radical Scavenging Demand

While the desired reactions in UV oxidation processes are between photo-generated hydroxyl radicals and contaminant molecules, the non-selective nature and high reactivity of hydroxyl radicals result in reactions between these species and various organic and inorganic water constituents, which always occur at much higher concentrations than the target micropollutants. Examples of such hydroxyl radical scavengers are the dissolved natural organic matter (NOM), carbonate and/or bicarbonate ions, iron and manganese ions, etc. Hydrogen peroxide itself reacts with hydroxyl radical; thus, the kinetic model used to determine the UV/H₂O₂ process conditions and to size the UV equipment optimizes the H₂O₂ concentration required to generate the highest •OH yield, while affecting a minimum •OH demand. The •OH water background demand has a negative impact on the steady-state concentration of hydroxyl radicals in the

water. Since the rate of contaminant degradation is proportional to the steady-state concentration of hydroxyl radicals, these hydroxyl radical scavenging reactions reduce the rate of contaminant degradation. The •OH water background demand (also known as ‘scavenging term’; $\sum k_s[S]$ or S.T.) is water matrix-specific and must be determined experimentally through a properly developed and validated method. Trojan routinely determines the scavenging demand of water samples at its laboratory in London, Ontario. The •OH water background demand is another key water quality parameter used by the kinetic model for sizing the UV equipment for a given UV/H₂O₂ AOP application.

In principle, the method for the •OH water background demand relies on the competition kinetics for the hydroxyl radicals between the water matrix constituents and a probe compound which is added to the sample (Zhou and Mopper, 1996; Rosenfeldt and Linden, 2007; Rosenfeldt, 2010; Lee and von Gunten, 2010; Keen *et al.*, 2014; Kwon *et al.*, 2014; Gerrity *et al.*, 2016; Wang *et al.*, 2020). The most used probe compound is para-chlorobenzoic acid (pCBA) providing its well characterized rate constant for the OH radical reaction ($5.0 \times 10^9 \text{ M}^{-1} \text{ s}^{-1}$; Buxton *et al.*, 1988) and known quantum yield and molar absorption coefficient at 254 nm. Upon reviewing the literature published over the years and extensive use of pCBA for quantification of OH radical steady state concentration, Trojan adopted and used pCBA as a probe for the •OH water background demand determination in samples collected from water treatment plants in the past.

In a recent article, Kim *et al.* (2021) reported for the first time in the literature on a potential unidentified reaction of pCBA in the UV/H₂O₂ process in addition to the known •OH- and direct photolysis-based degradation. The authors examined several chemical compounds of various structures as potential •OH chemical probes, among which, pCBA. The experimental data indicated that para-substituted benzoic acids, in particular, are vulnerable to attack by an unknown reactive species, leading to false quantification of •OH. As a result, the •OH water background demand measured using these probes, including pCBA, would be underestimated.

The authors postulated the triplet excited state of H₂O₂ as the reactive species responsible for the degradation of pCBA in addition to the •OH and direct photolysis pathways. Although there is no direct experimental evidence in the public domain on the decay of H₂O₂ excited states, Kim *et al.* advanced the idea of pCBA degradation *via* a H₂O₂ triplet state based on the observed pCBA byproducts containing the oxygen isotope (¹⁸O) atom when they used H₂¹⁸O₂.

Based on their experimental results, Kim *et al.* concluded that the impact of the reaction of (H₂O₂)* on the degradation kinetics of the •OH probe compound (*e.g.*, pCBA) would be more significant under the following conditions: (a) presence of high concentrations of •OH scavengers; (b) high concentration of H₂O₂ dosed to the water sample subject to •OH water background demand measurement; and (c) low concentration of dissolved oxygen. The higher the contribution of (H₂O₂)* to the kinetics of pCBA decay, the greater the underestimation of the •OH water background demand.

Providing the recent literature information and additional in-house investigation on pCBA suitability as a probe for the OH radical water matrix demand determination, Trojan decided not to use this compound as a probe anymore. Further proprietary research studies conducted

at Trojan resulted in adopting a reliable probe compound for OH radical water matrix demand. That compound has been used over the past 3-4 years.

Santa Monica Olympic wellfield water samples were submitted to Trojan in 2020 for determination of the hydroxyl radical scavenging demand and associated water quality parameters. The results are listed in Table 3-1, and they were all determined using pCBA as an •OH probe compound. The maximum value measured was for the SM-4 sample (90,400 s⁻¹). Nevertheless, this result measured using pCBA as the scavenging probe needed to be adjusted to the value believed to be more representative of the true value. Trojan has observed that this ratio can be up to 1.5 and therefore, the pCBA scavenging result was adjusted to a value of 130,000 s⁻¹ and this was the value used as the basis for the UV AOP system sizing and subsequently programmed into the UV system PLC during commissioning.

Table 3-1: Water Quality Analysis: Basis for UV System Design.

Sample ID	Date	Total chlorine (ppm)	Free chlorine (ppm)	pH	Total Alkalinity (ppm as CaCO ₃)	%UVT ₂₅₄ (%)	TOC (ppm)	Total Iron (ppm)	Nitrate (ppm as NO ₃) UV spec	OH* Scavenging (s ⁻¹)
SM-9	6/1/2020	N.D.	N.D.	7.17	423	98.1	0.317	0.06	15.6	86,500
SM-8	6/11/2020	N.D.	N.D.	7.66	240	95.0	0.265	0.22	3.0	51,800
SM-4 Filtered through 8 µm	7/3/2020	N.D.	N.D.	8.18	359	98.5	0.590	N.D.	28.0	90,400
SM-3	12/15/2020	N.D.	N.D.	7.67	323	98.9	0.353	0.02	24.6	42,900
SM-3 pH 6.3	12/15/2020	—	—	—	—	—	—	—	—	25,400

Note: The STs listed in the table were adjusted prior to design to correct for underestimated results based on use of pCBA as described above.

3.3 TROJAN UV/H₂O₂ SYSTEM CONTROLS

The operation of Trojan UV-Oxidation Systems for contaminant treatment is based on the calculation of an instantaneous contaminant log-reduction (LR) as a function of the fundamental contaminant kinetic parameters, system flow, UV transmittance, hydroxyl radical scavenging demand, H₂O₂ concentration and UV reactor intensity sensor values. The methodology is based on a contaminant treatment kinetic model that combines a fundamental photochemical kinetic model with an empirically validated UV dose model to accurately predict the degradation of contaminants in a UV-oxidation system (i.e., UV alone or combined with an oxidant to generate hydroxyl radicals).

Therefore, the UV system control algorithm provides a dynamically adjusted system based upon the identified process input parameters. These include flow rate, UVT, hydroxyl radical scavenging demand, and contaminant influent and target effluent concentration (to calculate target LRs). Further, by inputting the H₂O₂ and electrical energy costs, the algorithm calculates the combination of reactor power and H₂O₂ concentration that meets the contaminant treatment objective at the lowest operating cost. Specific constraints on the limits of the system operation can also constrain the operating conditions.

The fundamental photochemical kinetic model is based upon a contaminant-specific pseudo-first order UV fluence-based reaction rate constant (k', cm² /mJ) that accounts for contaminant

reduction due to both UV direct photolysis and hydroxyl radical oxidation. In addition to the contaminant-specific fundamental kinetic parameters (i.e., quantum yield (Φ_C), molar absorption coefficient (ϵ_C) & second order hydroxyl radical rate constant $k_{C,OH}$), this fluence-based rate constant k' is dependent upon the H_2O_2 concentration and the hydroxyl radical scavenging demand of the water ($\sum k_s[S]$ or S.T.). Typically, the scavenging demand of the water is considered to be either a constant value (based upon historical measurements) or linked to certain measurable water quality parameters. The H_2O_2 concentration is a control variable that can be monitored and adjusted together with the UV reduction equivalent dose (RED) to provide the target LR of the contaminant. The fluence-based rate constant for contaminant treatment with the UV/ H_2O_2 AOP is calculated using the following equation:

$$\frac{k_c}{I_{avg.}} = k'_c = \frac{\phi_c \epsilon_c LN(10)}{U} + \frac{LN(10)\phi_{OH}\epsilon_{H_2O_2}k_{c,OH}[H_2O_2]}{U(k_{H_2O_2,OH}[H_2O_2] + \sum k_{s,OH}[S])}$$

Eq. 1

where,

Symbol	Description
U	Photon energy at 253.7 nm (J/einstein)
ϕ_C	Quantum Yield of contaminant at 254 nm
ϕ_{OH}	Quantum Yield of OH radical formation from hydrogen peroxide photolysis
ϵ_C	Molar absorption coefficient of contaminant at 254 nm, $M^{-1} cm^{-1}$
$\epsilon_{H_2O_2}$	Molar absorption coefficient of hydrogen peroxide at 254 nm, $M^{-1} cm^{-1}$
$k_{C,OH}$	Reaction rate constant of contaminant with OH radical, $M^{-1} s^{-1}$
$k_{H_2O_2,OH}$	Reaction rate constant of H_2O_2 with OH radical, $M^{-1} s^{-1}$
$k_{s,OH}[S]$	Hydroxyl radical scavenging for various constituents S in the water matrix, s^{-1}

Equation 1 is provided and discussed further by Stefan (2018). Inspection of equation 1 shows that for a given contaminant and water quality (i.e., ($\sum k_s[S]$), the H_2O_2 concentration is the only independent variable.

This rate constant has the units cm^2 / mJ . The UV dose required to achieve 90% removal of a chemical pollutant (D_{10} , mJ/cm^2) is related to the fluence-based rate constant k'_c through equation (1):

$$D_{10} = Ln(10)/k'_c \quad \text{Eq. 2}$$

Therefore, for a given H_2O_2 concentration, a target LR (LR_t) is achieved by delivering the required UV dose i.e., the reduction equivalent dose (RED, mJ/cm^2).

$$RED_t = D_{10} \times LR_t \quad \text{Eq. 3}$$

The UV dose delivered by a UV reactor is a function of various parameters among which the water flow rate and UVT, the lamp power level, the quartz sleeve transmittance (including fouling) and the UV reactor efficiency. The flowrate and UVT are measured parameters. The lamp power level is the controlled/independent variable.

In disinfection applications, the RED for a UV reactor is calculated using a bioassay-generated validated equation in which RED is a function of UV lamp power level/UV intensity measurement, flowrate, UVT and D_{10} (i.e., the dose per log inactivation of a microorganism). Similarly, for UV-AOP applications, Trojan has developed a RED equation for the TrojanUVFlex200 reactor using an empirically validated computational fluid dynamics (CFD) model to relate RED to the UV intensity sensor values, flowrate, UVT, and contaminant D_{10} .

The control algorithm evaluates various combinations of lamp power and related RED and H_2O_2 dose and related D_{10} , all of which meet the contaminant LR target and selects that combination which represents the minimum operating cost.

4 METHOD

4.1 EXPERIMENTAL SET UP

UVT Modifier, Hydrogen Peroxide and Contaminant Dosing

To produce UV influent water quality that matches the design UVT value, Aqua Hume solution was injected into the 12-inch diameter greensand effluent pipe approximately 250 feet upstream of the UV reactors. A Blue-White peristaltic pump was used to inject diluted Aqua Hume at rates between about 9 ml/min to 250 ml/min. An injection wand was assembled that delivered the Aqua Hume solution into the center of the greensand effluent pipe.

The permanent H_2O_2 delivery system was used to inject H_2O_2 from the H_2O_2 storage tank containing 50% H_2O_2 into the 12-inch diameter UV influent pipe approximately 65 feet upstream of the reactors.

To quantitatively demonstrate the required log reduction targets of 1,4-dioxane, the 1,4-dioxane concentrations required in the UV influent were chosen such that the contaminant concentrations could be accurately measured in both UV influent and UV effluent samples. Therefore, the influent contaminant concentrations needed to be high enough to ensure that the 1,4-dioxane concentrations in the UV effluent samples would exceed the analytical method reporting limit (MRL). The analytical method employed for 1,4-dioxane analysis was EPA Method 522, which has an MRL of 0.070 $\mu\text{g/L}$ and an MDL of 0.028 $\mu\text{g/L}$. Since it was recommended to avoid working at concentrations approaching the MRL, a target UV effluent 1,4-dioxane concentration of 0.1 $\mu\text{g/L}$ was chosen.

The 1,4-dioxane injection stock was prepared by diluting between 6.2 grams and 146 grams of >99.5% pure 1,4-dioxane (Sigma Millipore #34857 batch #MKCQ8470) to 1.0 L with distilled water to prepare stock solutions ranging from 6,200 mg/L to 146,000 mg/L. These stocks were injected using a peristaltic pump into the UV influent piping adjacent to the Aqua Hume injection location described above.

Achievement of Steady State Operation

A critical requirement is that the UV system be operating at steady state prior to collection of the UV reactor influent-effluent sample pairs. A tracer test was performed to determine the time required for the system to reach steady state following a process change. The UVT modifier Aqua Hume (UAS of America), which is a liquid concentrate natural organic matter, was used as the tracer compound. A step change in the UVT was made and samples were collected at specified time intervals at both the reactor influent and effluent sample ports. The reactor lamps were off during this test. The samples were analyzed on-site for UVT to determine the time required for the system to reach steady state following a change in process conditions.

4.2 TEST PROCEDURE

The general procedure for each test completed was:

- Set and verify stable system flow at the target value.
- Begin injection of Aqua Hume (i.e., UVT modifier) and H₂O₂.
- Select the UV system control mode.
- Ensure that the correct ST is entered in the PLC.
- If local control is selected, turn on the desired number of lamp sections and set the lamp power level.
- If remote (i.e., auto) control is selected ensure that the correct contaminant log reduction targets are entered.
- Confirm that the target UV influent UVT and H₂O₂ dose is achieved.
- Confirm that the UV reactor operation is stable (i.e., number of lamp sections and power level).
- Begin injection of 1,4-dioxane stock solution.
- Wait for steady state time to elapse.
- Record the relevant data.
- Collect the influent and effluent sample pairs.
- Measure hydrogen peroxide and UVT in the UV influent and UV effluent grab samples.

Test Matrix

Table 4-1 presents the test matrix and summarizes the operational setpoints and predicted conditions as well as the notes describing the rationale for each specific test condition.

Near-ambient UVT (~98.5%) was tested as well as the design UVT of 96% and a minimum UVT target of 93%.

All tests were completed with combinations of wells SM-8 and SM-9 and using UV Train 2. Well SM-4 was not operational during the performance test. Whereas the test matrix states that UV Train 1 will be tested, an issue with the Train 1 outlet valve control resulted in the switch to test Train 2. The design and performance of the two parallel trains are considered to be identical, which is the basis for only testing one train. The first five tests, including two control tests, were to be performed in manual (i.e., local control) mode to ensure testing took place

under the conditions tied to the maximum power draw and peroxide dose set out in the contract documents. To conduct these tests in manual mode, the number of lamp sections operating, lamp power and H₂O₂ dose were manually set to the specified values. Tests 1, 2 and 3 were all performed at a BPL of 84% to simulate end of lamp life and sleeve fouling design conditions.

The two control tests were performed to demonstrate the expected result that no 1,4-dioxane treatment is achieved in the absence of both UV and H₂O₂ and that reduction of PCE and especially TCE is minimal by direct UV photolysis only (i.e., in the absence of H₂O₂). The tests were also included to assess the integrity of sample collection, handling, and analytical quality control.

Tests 4, 5 and 6 were performed in automatic control mode at the design flow and design LR target of 2.4 LR 1,4-dioxane, 2.2 LR TCE and 2.3 LR PCE. Test 4 is at the design UVT of 96%, test 5 is at 93% UVT and test 6 is at ambient UVT. These tests will demonstrate the ability of the system controls to respond to water quality changes. Tests 7 and 8 targeted a lower 1,4-dioxane LR (i.e., 1.2 log) with the design ST (130,000 s⁻¹) and measured ST (124,000 s⁻¹) entered into the UV PLC. Test 9 is a duplicate of test 6 but at the lower flow of 1,500 gpm. Tests 10 through 13 were conducted at 1,000 gpm each and show the impact of well blend. Tests 10 and 11 were performed with SM-9 only while tests 12 and 13 were performed with well SM-8 only. The paired tests utilize the design and measured ST values. Tests 14 and 15 are duplicate tests that targeted a lower 1,4-dioxane LR (i.e., 1.2 log) from water with a reduced pH (i.e., 6.5). Tests 16 and 17 are duplicates of test 6 but with a lower 1,4-dioxane LR (i.e., 1.8 log) and with the design and measured ST values entered in the PLC. Tests 18, 19 and 20 were performed with low pH water (i.e., 6.5). Tests 18 and 19 were performed at the ambient UVT and design UVT (96%) respectively and at the design flow and ST. Test 20 was performed at the ambient UVT, design flow and measured ST.

Sample Handling

Sample bottles were provided by Weck Laboratories Inc. (Industry, CA) for 1,4-dioxane, VOC and typical water quality parameter analyses. UV influent samples were collected first followed by the UV effluent samples, ensuring the steady-state operating conditions upon any change in the test variables (see Table 4-1). Separate containers were used to obtain pre-H₂O₂ influent, post-H₂O₂ influent and UV effluent samples for UVT and H₂O₂ on site analysis, with the analysis being completed by Trojan within approximately 15 minutes of sample collection. Samples were placed in coolers with ice and collected by the Weck sample couriers, with Chain of Custody procedures followed.

UV Transmittance (UVT)

Samples for the “background” water UVT analysis (prior to H₂O₂ injection but after UVT modification) were collected from the online UVT meter (i.e., Trojan Optiview) sample line that is drawn from the common influent header immediately upstream of the H₂O₂ injection port. The hydraulic retention time (HRT) between this port and the Aqua Hume injection port is approximately 1 minute at a flow of 2,000 gpm. Grab samples for the background water and from

the UV influent and effluent sample ports were measured using a 4-cm path length quartz cell and a RealUVT™ 254 nm portable photometer (RealTech Inc., Canada).

Hydrogen Peroxide

Hydrogen peroxide was measured using the DPD/peroxidase method described by Bader *et al.* (1988). In this procedure, hydrogen peroxide reacts with DPD reagent (Hach Company) through a reaction catalysed by the peroxidase enzyme (horseradish peroxidase, Millipore Sigma USA).

Hydroxyl Radical Scavenging Demand

As mentioned in section 3.2.2, Trojan routinely determines the scavenging demand of water samples at its laboratory in London, Ontario. The scavenging determination SOP involves spiking into an aliquot of the water sample a probe compound, for which the rate constant for the •OH reaction is available in the published literature and which was also confirmed by Trojan, and H₂O₂. The spiked water samples are irradiated to precise UV doses at 253.7 nm from a UV lamp mounted in a low-pressure collimated beam apparatus. The *quasi*-parallel UV light beam is perpendicular to the water sample surface. UV fluence rate at the water surface is measured using a calibrated radiometer (International Light Technologies Inc.) and the exposure times with NIST traceable stopwatches. The sample results are used to develop a UV dose-response relationship, from which the probe degradation kinetics is calculated, and subsequently the •OH water matrix scavenging capacity is determined.

1,4-Dioxane and Remaining Parameters

All analyses were performed by Weck Laboratories, Inc. (Industry, CA). Chain-of-custody forms were used, and the laboratory reports were sent to Walsh and Brown and Caldwell. TCE and PCE were analyzed using USEPA method 524.2, with MRLs of 0.50 µg/L and MDLs of 0.18 µg/L. 1,4-Dioxane analysis was performed using USEPA method 522 with an MRL of 0.070 µg/L and a method detection limit (MDL) of 0.028 µg/L. All parameter method details are listed in Table 4-2.

Table 4-2: Analytical details for Weck Laboratory methods.

ANALYTE	METHOD	MDL	MRL	UNITS
1,4-Dioxane	EPA 522	0.028	0.07	µg/L
TCE	EPA 524.4	0.18	0.5	µg/L
PCE	EPA 524.4	0.18	0.5	µg/L

Table 4-1: Planned test matrix.

No.	Test ID	Well Blend			Testing Setpoints									Performance Predictions				Chemical Dosing			Notes
		SM-4	SM-8	SM-9	System Flow Rate (gpm)	Train in Operation	Mode	Lamp Power (%)	H2O2 Setpoint	Scavenging	1,4-D Log Setpoint	TCE Log Setpoint	PCE Log Setpoint	Predicted 1,4-D Log Reduction	Predicted TCE Log Reduction	Predicted PCE Log Reduction	Lamp Sections On	1,4-D	UVT	pH	
		(gpm)	(gpm)	(gpm)					(mg/L)									(s ⁻¹)	(µg/L)	(%)	
C1	UV-PTC1	0	1000	1000	2,000	1	Manual	0	40	130,000	-	-	-	0			0	spike	amb.	amb.	Control 1: H2O2 Only
C2	UV-PTC2	0	1000	1000	2,000	1	Manual	100	0	130,000	-	-	-	0			11	spike	amb.	amb.	Control 2: UV Only
1	UV-PT1	0	1000	1000	2,000	1	Manual	84	40	130,000	-	-	-	3.54	3.68	3.14	11	spike	96	amb.	Design flow, UVT, ST conditions
2	UV-PT2	0	1000	1000	2,000	1	Manual	84	40	130,000	-	-	-	3.54	3.68	3.14	11	spike	96	amb.	Duplicate design flow, UVT, ST conditions
3	UV-PT3	0	1000	1000	2,000	1	Manual	84	40	124,000	-	-	-	3.54	3.68	3.14	11	spike	96	amb.	Duplicate design flow and UVT with measured ST
4	UV-PT4	0	1000	1000	2,000	1	Auto	97.5	35.20	130,000	2.4	2.2	2.3	2.85	2.97	2.56	8	spike	96	amb.	Design flow, UVT, ST conditions in auto mode
5	UV-PT5	0	1000	1000	2,000	1	Auto	94.5	35.20	130,000	2.4	2.2	2.3	2.86	2.97	2.56	11	spike	93	amb.	Design flow and ST conditions in auto mode with lower UVT
6	UV-PT6	0	1000	1000	2,000	1	Auto	97	37.34	130,000	2.4	2.2	2.3	3.30	3.43	2.95	7	spike	amb.	amb.	Design flow and ST conditions in auto mode at ambient UVT
7	UV-PT7	0	1000	1000	2,000	1	Auto	88.5	35.20	130,000	1.2	1.1	1.15	1.45	1.51	1.28	3	spike	amb.	amb.	Added - Design flow and ST at ambient UVT with lower LRV
8	UV-PT8	0	1000	1000	2,000	1	Auto	85.5	35.20	124,000	1.2	1.1	1.15	1.42	1.47	1.25	3	spike	amb.	amb.	Added - Design flow at ambient UVT with lower LRV and measured ST
9	UV-PT9	0	750	750	1,500	1	Auto	87.5	36.27	130,000	2.4	2.2	2.3	2.86	2.97	2.56	5	spike	amb.	amb.	This is run 6 with a lower flow rate
10	UV-PT10	0	0	1000	1,000	1	Auto	72	34.67	130,000	2.4	2.2	2.3	2.74	2.85	2.49	4	spike	amb.	amb.	Vary well blends with Design LRV, ambient UVT at a lower flow and design ST
11	UV-PT11	0	0	1000	1,000	1	Auto	69.5	34.67	124,000	2.4	2.2	2.3	2.68	2.79	2.43	4	spike	amb.	amb.	Vary well blends with Design LRV, ambient UVT at a lower flow and measured ST
12	UV-PT12	0	1000	0	1,000	1	Auto	74	34.67	130,000	2.4	2.2	2.3	2.91	3.03	2.62	4	spike	amb.	amb.	Vary well blends with Design LRV, ambient UVT at a lower flow and design ST
13	UV-PT13	0	1000	0	1,000	1	Auto	71.5	34.67	124,000	2.4	2.2	2.3	2.86	2.97	2.57	4	spike	amb.	amb.	Vary well blends with Design LRV, ambient UVT at a lower flow and measured ST
14	UV-PT14	0	1000	1000	2,000	1	Auto	65	34.67	90,000	1.2	1.1	1.15	1.48	1.54	1.26	3	spike	amb.	6.5	Included to provide more data related to low-pH operation
15	UV-PT15	0	1000	1000	2,000	1	Auto	65	34.67	90,000	1.2	1.1	1.15	1.48	1.54	1.26	3	spike	amb.	6.5	Included to provide more data related to low-pH operation
16	UV-PT16	0	1000	1000	2,000	1	Auto	80.5	35.74	130,000	1.8	1.65	1.73	2.17	2.25	1.92	5	spike	amb.	amb.	This is run #6 with a lower LRV
17	UV-PT17	0	1000	1000	2,000	1	Auto	78	34.67	124,000	1.8	1.65	1.73	2.11	2.19	1.88	5	spike	amb.	amb.	This is run #16 with measured ST
18	UV-PT18	0	1000	1000	2,000	1	Auto	97	37.335	130,000	2.4	2.2	2.3	4.11	4.26	3.55	7	spike	amb.	6.5	This is run 6 with reduced pH and design ST
19	UV-PT19	0	1000	1000	2,000	1	Auto	97.5	35.203	130,000	2.4	2.2	2.3	3.56	3.70	3.08	8	spike	96	6.5	This is run 18 with design UVT and ST
20	UV-PT20	0	1000	1000	2,000	1	Auto	93	35.736	90,000	2.4	2.2	2.3	2.97	3.08	2.56	5	spike	amb.	6.5	This is run 6 with reduced pH and measured ST (at the lower pH)

Note that Lamp Power, H₂O₂ Setpoint and Lamp Sections On values for Auto control mode runs (i.e., 4 to 20) are estimates based on specified operating conditions and design water quality.

5 RESULTS

5.1 MIXING AND STEADY STATE

A mixing/steady state test was completed on September 21st, 2023. The test was performed at a flow of approximately 1,000 gpm through UV train 2 with the UV reactor off and using Aqua Hume as the tracer compound. At time $t=0$ minutes Aqua Hume injection was started and samples were collected from the UV influent and UV effluent sample ports at various times up to 32 minutes. The grab samples were measured for UVT using the bench-top Real Tech photometer.

UVT values were converted to UV absorbance ($UVA = -\text{Log}(UVT)$) and the test results are plotted versus time in Figure 5-1. UVT was reduced by Aqua Hume from 97.5% to about 85.7%. The data in Figure 5-1 shows that UVA had reached steady state at the UV influent port about 3 or 4 minutes after beginning Aqua Hume injection and it took at least 6 minutes more before steady state UVA was reached at the UV effluent sample port. There was an anomalous UV influent UVA result for the sample collected at 10 minutes, where the UVA decreased significantly to 0.0567 cm^{-1} before increasing again in the next sample at 15 minutes to 0.0671 cm^{-1} . Because of this anomalous sample, it was decided to conclude that steady state with respect to UVA/UVT at the UV effluent sample port is achieved 20 minutes after beginning Aqua Hume injection. Given that the 1,4-dioxane stock solution is injected at approximately the same location as the Aqua Hume injection port, the 1,4-dioxane would also reach steady state at the UV effluent port 20 minutes after beginning injection. Therefore, for a system flow of approximately 1,000 gpm the UV effluent samples were collected a minimum of 20 minutes after beginning Aqua Hume and 1,4-dioxane injection. Assuming that time to reach steady state is inversely proportional to flow, for flows of 1,500 gpm and 2,000 gpm, samples were collected 15 minutes and 10 minutes, respectively, after beginning injection at those flowrates. Given that the calculated HRT in the UV reactor at the design flow of 2,000 gpm is approximately 3 minutes, UV influent samples were collected up to 3 minutes prior to collecting the UV effluent samples.

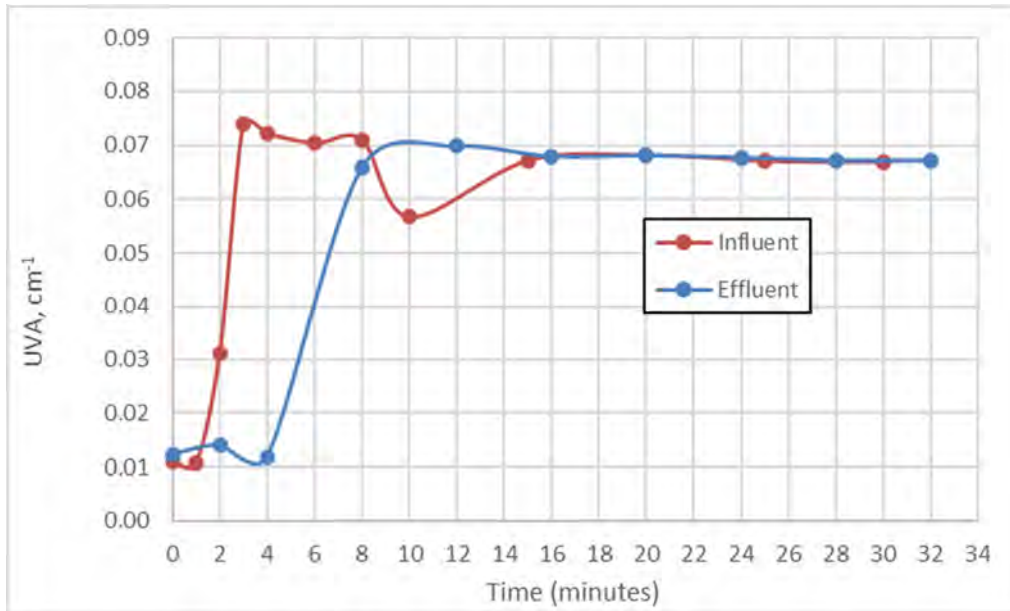


Figure 5-1 Mixing/steady state test results performed at 1,000 gpm through UV Train #2.

5.2 WATER QUALITY

Water samples were collected from the site on each of the five test days of Performance Testing (September 22 and October 2-5) and sent to the Trojan Laboratory for analysis of water quality parameters. The sampling location varied and included the pre- and post-greensand filtration ports and pre- and post- 1,4-dioxane and UVT modifier spiking (in post-greensand filtration samples) ports. One sample was collected at the UV effluent port for the purpose of examining the change in the water quality parameters relative to those of the UV influent sample. Therefore, one should differentiate between the water quality parameters representative to the well water and/or well water blend and those which are representative to the actual test conditions (i.e., in the presence of 1,4-dioxane with or without Aqua Hume addition). The only sample containing H₂O₂ was the sample collected at the UV effluent port. The samples collected during the Performance Testing and their description along with the water quality parameters reported by the Trojan Laboratory are summarized in Table 5-1.

As shown in Table 5-1, the well blend samples were collected once per day. If the water quality parameters did not change during the day of testing, then the analytical data shown in Table 5-1 would be valid for all tests performed on that day. However, should the water quality vary during the day, the data reported in the table should be considered with caution as it may represent only the water parameters associated with the tests performed at the time of sampling.

Table 5-1: Trojan water quality results for Arcadia WTP samples.

	SM8 Post-greensand (Sep 22 13:00)	UV-PT2 Post-greensand pre-spike (Oct 2 15:40)	UV-PT2 UV Influent pre-H2O2 (Oct 2 ~15:40)	Pre-Greensand (Oct 3 15:45)	Pre-H2O2 (Oct 3 15:45)	PT20 Pre-H2O2 (Oct 4 15:00)	PT20 UV Effluent (Oct 4 15:00)	PT9 Pre-H2O2 (Oct 5 9:00)	SM9 PT10 pre-H2O2 (Oct 5 13:25)
Well Blend	SM-8	50:50 Blend of SM-8:SM-9	50:50 Blend of SM-8:SM-9	50:50 Blend of SM-8:SM-9	50:50 Blend of SM-8:SM-9	50:50 Blend of SM-8:SM-9	50:50 Blend of SM-8:SM-9	50:50 Blend of SM-8:SM-9	SM-9
Ammendments	No 1,4-Dioxane spike; ambient UVT & pH	No 1,4-Dioxane spike; ambient UVT & pH	350 ug/L 1,4-Dioxane spike; 96% UVT & ambient pH	No 1,4-Dioxane spike; ambient UVT & pH	No 1,4-Dioxane spike; ambient UVT & pH	176 ug/L 1,4- Dioxane spike; ambient UVT & reduced pH	176 ug/L 1,4- Dioxane spike; ambient UVT & reduced pH	No 1,4-Dioxane spike; ambient UVT & pH	No 1,4-Dioxane spike; ambient UVT & pH
UVT (%)	96.7%	98.3%	96.4%	99.0%	98.5%	98.6%	99.2%	99.1%	98.8%
pH	7.35	7.57	7.70	7.71	7.58	6.96	6.79	7.22	7.61
TOC (mg/L)	1.03	0.54	0.76	0.95	0.55	0.65	0.62	0.49	0.87
Alkalinity (mg/L as CaCO₃)	335	377	387	385	379	305	307	377	432
Nitrate (mg/L as NO₃⁻)	29.1	23.5	23.6	22.7	22.8	22.7	22.5	25.0	19.0
Nitrite (mg/L as NO₂⁻)	na	0.011	0.014	na	0.013	0.011	0.103	0.010	na
OH Radical ST (s⁻¹)	86,250	na	128,000	na	107,530	85,300	na	na	90,000

Sample SM8 post-greensand filtration was collected and analyzed in September 2023 when tests PT12 and PT13 were performed. The data shown in Table 5-1 for the 50:50 SM8:SM9 well water blend used in all October tests except PT10 and PT11 (100% SM9 well water) may not reflect the average of the parameters listed for the SM8 (Sep 2023) and SM9 (Oct 2023) samples, as the water quality of SM8 well water may have varied from September to October.

The next paragraphs are concerned with a brief data interpretation of the Trojan analytical results for the samples shown in Table 5-1.

UV Transmittance (UVT). The UVT in samples collected under ambient water quality conditions varied from 98.3% to 99.1% (October samples), with the UVT of 96.7% measured for SM8 sample collected and analyzed in September. Sample UV-PT2 UV Influent pre-H₂O₂ contained Aqua Hume, which was intentionally added to the well water blend for testing the UV/H₂O₂ system performance at the design UVT. The UVT data reported by Trojan Laboratory agree well with the UVT data recorded at the site for the tests performed in those days.

Water pH. The pH data for the October samples collected from test runs at the ambient water pH condition spanned from ~7.2 (PT9 pre-H₂O₂) to ~7.7 (Pre-greensand and PT2 post-greensand pre-spike); pH of SM8 sample collected during Performance Testing event in September was also within this range. All these values are larger than those recorded at the site (~6.8 – 7.1). The pH values in samples from PT20 test (pre-H₂O₂ and UV Effluent) were ~7.0 and 6.9, respectively, also greater than those measured at the site, i.e., 6.5. Of note, for this PT20 test, pH was intentionally depressed at the site to examine the impact of pH on 1,4-dioxane, PCE and TCE degradation yields relative to those observed in tests at ambient pH. The water in the two wells (SM8 and SM9) are high in alkalinity. Since carbonic acid pK_{a1} is 6.35, lowering pH would reduce the concentration of bicarbonate ion in the favor of carbonic acid, thus, reducing the OH radical ST capacity of the water; $k(\bullet\text{OH}, \text{HCO}_3^-) = 8.5\text{E}+06 \text{ M}^{-1} \text{ s}^{-1}$; $k(\bullet\text{OH}, \text{CO}_2) = <1\text{E}+06 \text{ M}^{-1} \text{ s}^{-1}$; Buxton *et al.*, 1988). The overall alkalinity (as CaCO₃) in a given water sample would be *quasi*-similar at pH ~7 and ~6.5, while the contribution of bicarbonate to the overall OH radical water matrix demand would be different due to the pH-driven distribution of the two carbonate species (H₂CO₃ and HCO₃⁻). Therefore, in a given water, a lower ST is expected at pH 6.5 than at pH~7, and that is reflected in Table 5-1 which shows the lowest ST in PT20 pre-H₂O₂ sample of pH 6.5 as measured at site.

Total Organic Carbon (TOC). The TOC concentration was very low in all samples and varied from ~0.5 to ~1.0 mg/L. These low TOC levels explain the high UVT values measured for the samples at ambient water quality condition and, although the TOC speciation (i.e., composition) is not known, it would indicate a relatively small contribution of the organics constituting TOC to the overall OH radical water matrix demand.

Of note, the difference of ~0.2 mg/L in the TOC measured in samples PT2 post-greensand pre-spike and UV-PT2 pre-H₂O₂ is attributed to the organic matter contained in the Aqua Hume amount added to the water as a UVT modifier, and it is associated with the observed change in UVT.

Alkalinity (expressed as CaCO₃). Alkalinity was high in all samples and ranged from 377 to 387 mg/L in greensand-filtered 50:50 SM8:SM9 well blend samples at their ambient pH. The PT20 samples (UV influent and UV effluent) had similar alkalinity (~305 mg/L) and lower than observed in the other samples (50:50 well blend), due to the lower pH in these samples. The alkalinity concentration measured in the SM8 (September) and SM9 (October) water samples was 335 and 432 mg/L, and bracketed the values determined in the blended water. At a 50:50 SM8:SM9 blending ratio, the calculated alkalinity would be ~384 mg/L, which is also within the measured range, and may indicate that the alkalinity in wells SM8 and SM9 was constant throughout the Performance Testing event.

Nitrate. Except for the SM8-only and SM9-only samples, all the other samples represent a 50:50 well water blend. Nitrate ranged from 22.5 to 25.0 mg/L as NO₃⁻. Nitrate in the SM8 (September) and SM9 (October) samples were quantified as 29.0 and 19.0 mg/L as NO₃⁻, which bracketed the data for the blended water, but also indicated a significant difference in water quality of the two wells. Nitrate is a rather poor absorber of the 253.7 nm radiation (molar absorption coefficient of ~4 M⁻¹ cm⁻¹), but in high concentrations and at high UV doses, its photolysis to *intermediates* leading to nitrite becomes significant. Therefore, *in-situ* formation of nitrite and its reaction with hydroxyl radical is not negligible. Moreover, pH, alkalinity and H₂O₂ concentrations play important roles in nitrate photolysis to nitrite, with nitrite increasing as these parameters' values increase. The mechanism is complex and not fully elucidated in the literature studies.

Nitrite. The nitrite levels measured by Trojan in all samples except for the PT20 UV Effluent sample were very low and approached the 10 micrograms/L detection limit of the ion-chromatography method used by Trojan. The nitrite measured in the PT20 UV Effluent was ~103 micrograms/L. During UV-AOP treatment nitrite is simultaneously formed through direct UV photolysis of nitrate and destroyed through rapid reaction with the OH radical. This rapid reaction with the OH radical means that nitrite has the potential to be a significant OH radical scavenger. The UV-AOP controls program accounts for this formation of nitrite and its impact on the ST. However, if significant nitrite ion was present in the UV influent water and if its concentration in the influent water was variable during the Performance Testing, then it could cause unrecognized variability in the ST from test to test. It is also important to mention that nitrite is slowly oxidized to nitrate by dissolved oxygen and this reaction could have occurred between the time of sample collection and nitrite analysis. Therefore, it is conceivable to assume that the levels reported by Trojan in Table 5-1 could be lower than those in the samples at their collection time.

A sample identified as PT-SW8-S4 was collected by Brown and Caldwell at the greensand influent port on the morning of Oct 4th (PT8 test condition) and submitted to Weck Laboratories for comprehensive analysis. According to Weck's report, the sample contained 50 micrograms/L nitrite-N, which is equivalent to 164 micrograms/L NO₂⁻. It is unclear whether the greensand filter would remove nitrite, and whether the water quality parameters of the well water blend varied during the day of Oct 4th. Nitrite is a strong OH radical scavenger and its contribution to the ST at a 164 microgram/L level would be approximately 36,000 s⁻¹, estimated using $k(\bullet\text{OH}, \text{NO}_2^-) = 1.0\text{E}+10 \text{ M}^{-1} \text{ s}^{-1}$ (Buxton et al. 1988).

It should be noted that typical operation of the greensand filters will involve injection of sodium hypochlorite upstream of the filters and this would oxidize any nitrite ion, converting it to nitrate. However, hypochlorite was not injected during any of these performance tests and therefore nitrite ion present in the well water could have increased the ST during these performance tests.

OH Radical water matrix “demand” (also commonly known as OH radical term, ST). The OH radical ST (s^{-1}) was determined only for some of the samples received by Trojan. Note that the OH radical ST for SM8 Post-greensand sample was determined in September and it would be characteristic to the water used in those tests (PT12 and PT13). 1,4-Dioxane in that water sample would have been at its ambient level. The same statement is valid for the Pre- H_2O_2 (Oct 3 15:45) and SM9 PT10 Pre- H_2O_2 , i.e., the listed OH radical STs are representative to the 50:50 well water blend and 100% SM9 well water, respectively. However, should the well blend quality vary from one day to another or during the day of testing, the analytical data shown in Table 5-1 would be representative only to the test(s) conducted at the time of sample collection. All OH radical STs shown in Table 5-1 include the contributions of alkalinity, organic and inorganic compounds present or added to the water (except for H_2O_2) and of nitrite present and/or formed from the intermediates of nitrate photolysis.

The OH radical STs determined in the samples listed in Table 5-1 are dominated by the contribution of alkalinity, e.g., 74.5% (SM-8 Post-greensand); 56.5% (UV-PT2 UV Influent pre- H_2O_2); 66% (Oct 3rd Pre- H_2O_2); 62% (PT20 pre- H_2O_2); 90% (SM9 PT10 pre- H_2O_2). The largest value of 128,000 s^{-1} was observed for the UV-PT2 UV Influent pre- H_2O_2 sample, which contained both 1,4-dioxane and Aqua Hume spiked during that test. Therefore, along with the contributions of alkalinity, of nitrite formed from nitrate photolysis and subsequent reactions of its intermediates, and of 1,4-dioxane, there is some contribution from Aqua Hume to the ST of the October 3rd UV Influent pre- H_2O_2 sample.

As expected, the lowest OH radical ST across all samples collected from the October tests (85,300 s^{-1}) was determined in the PT20 Pre- H_2O_2 (Oct 4 15:00) sample. That is essentially explained by a lower contribution of alkalinity to the overall ST than in the other samples due to the lower pH (6.5) of the water in this test. Note that 1,4-dioxane was also present in this sample received from the site and nitrite was also formed during the procedure of ST determination.

The lower ST at a low pH is primarily explained by the reaction of peroxyxynitrite ($ONOO^-$), which is the key intermediate in nitrate photolysis, with CO_2 (higher concentration at low pH than at neutral pH) leading to nitrate and to the decomposition of peroxyxynitrous acid ($ONOOH$), which is the conjugate acid of peroxyxynitrite, to nitrate (70%), both of which reduce the nitrite yield [$pK_a(ONOOH)=6.8$; $pK_a(H_2CO_3)=6.35$].

5.3 ON-SITE DATA AND MEASUREMENTS

Table 5-2 presents several key on-site measurements recorded for each test run. These include the measured flow and the estimated percent well blend, the number of lamp sections operating, and the percent lamp power level, the control mode (i.e., manual or automatic), the ST value entered into the PLC, the online influent (i.e., pre-H₂O₂) UVT value, the PLC-calculated influent H₂O₂ concentration and predicted effluent H₂O₂ concentration. The compliance and operating log reduction targets for 1,4-dioxane, TCE, and PCE are also listed, along with the PLC-calculated (i.e., predicted) log reductions for each contaminant in all tests. The default PLC program does not provide performance predictions when the system is in local control mode and the entered target log reduction values are irrelevant. A subsequent update of the PLC program enabled these performance predictions to be provided when the system was operated in local control mode.

Table 5-3 lists the results of on-site benchtop analyses, including measured UVTs and H₂O₂ concentrations, for UV influent and UV effluent samples for each test. Also presented in Table 5-3 are the UV influent ‘background’ UVTs provided by the Trojan Optiview online UVT meter and the ‘background’ UVTs of grab samples collected upstream of H₂O₂ injection and downstream of Aqua Hume injection and measured on-site using the benchtop photometer. The presented background influent UVT and background effluent UVT values are calculated from the measured influent and effluent UVTs by subtracting the contribution to those UVTs by the measured H₂O₂ concentrations. The background water includes the impact of Aqua Hume on UVT. The online pH meter values are also provided for each test.

UVT Measurements and PLC calculations

Figure 5-2 compares the online UVT measurements to the background UVT grab samples measured using the bench-top photometer. The results are in very good agreement, suggesting that the online UVT meter will provide a highly accurate UVT signal upon which the PLC can base contaminant log reduction predictions. Furthermore, as presented in Table 5-3, the calculated influent background UVT based on the analyses of influent UVT and H₂O₂ also agree very well with both the online and grab sample measurements. The agreement among the three UV influent background UVT sets also validates the calculation method, which is the same calculation method used by the PLC to determine the UVT of the influent water. The same calculation method is also used to predict the background UVT of the water leaving the UV reactor (i.e., UVT of water in absence of H₂O₂). For the control test for which the UV reactor was off, we see that the calculated effluent background UVT is almost identical to the influent background UVT, as expected. Nevertheless, for all other tests the effluent background UVT has increased relative to the influent UVT and especially so for those tests in which Aqua Hume was injected. While this change is difficult to predict, it is not unexpected and is thought to be due to partial AOP treatment of the UV absorbing molecules in the Aqua Hume (e.g., humic & fulvic acids) resulting in decreased UV absorbance, as discussed in Section 5.2. The data for these tests show that the absolute change in UVT is inversely proportional to the UVT of the influent water. That is, Test 5 resulted in ~2.5% increase in UVT across the reactor while tests 1 to 4 averaged about a 1.94% increase and the remaining tests averaged about a 0.74% increase. That is, the higher the concentration of Aqua Hume that was dosed, the larger the increase in UVT. It is also observed that the increase in background UVT was less (i.e., 0.46%

average) for the tests targeting the lowest treatment levels (i.e., tests 7, 8, 14 & 15) and conducted at ambient UVT. That is, when less AOP treatment was applied, there was less apparent degradation of the UV-absorbing compounds.

Table 5-2: Test Data Recorded from UV HMI

Test ID	Date/Time	Well Blend		Total Flow (gpm)	Control Mode	Lamp Sections	Lamp Power (%)	Entered Scavenging Term (s ⁻¹)	Online H2O2		Compliance Setpoint			Operating Setpoint			PLC Calculated LR			
		SM-8	SM-9						Online UVT	Feed	Residual	1,4-Dioxane	PCE	TCE	1,4-Dioxane	PCE	TCE	1,4-Dioxane	PCE	TCE
		(%)	(%)						(%)	(mg/L)	(mg/L)	(log)	(log)	(log)	(log)	(log)	(log)	(log)	(log)	(log)
UV-PTC1	10/2/2023 13:10	50%	50%	2,000	Manual	0	0%	130,000	97.80%	39.60	39.60	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
UV-PTC2	10/2/2023 14:37	50%	50%	2,003	Manual	11	100%	130,000	97.61%	0.00		Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
UV-PT1	10/2/2023 15:35	50%	50%	1,997	Manual	11	84%	130,000	95.64%	39.73	-	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
UV-PT2	10/2/2023 15:40	50%	50%	1,997	Manual	11	84%	130,000	95.69%	39.70	-	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
UV-PT3	10/2/2023 16:22	50%	50%	1,999	Manual	11	83%	124,000	95.76%	36.98	-	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
UV-PT4	10/3/2023 10:45	50%	50%	1,982	Auto	10	77.5%	130,000	95.89%	30.71	16.13	2.4	2.3	2.2	2.64	2.53	2.42	2.66	2.55	2.78
UV-PT5	10/3/2023 11:30	50%	50%	1,981	Auto	11	95%	130,000	93.45%	38.30	21.38	2.4	2.3	2.2	2.64	2.53	2.42	2.76	2.54	2.87
UV-PT6	10/3/2023 14:04	50%	50%	1,988	Auto	7	82%	130,000	98.54%	28.59	14.18	2.4	2.3	2.2	2.64	2.53	2.42	2.65	2.59	2.77
UV-PT7	10/4/2023 8:50	50%	50%	1,972	Auto	4	64.5%	130,000	98.45%	23.44	16.97	1.2	1.15	1.1	1.32	1.27	1.21	1.33	1.30	1.39
UV-PT8	10/4/2023 9:10	50%	50%	1,970	Auto	4	61.5%	124,000	98.62%	22.19	16.02	1.2	1.15	1.1	1.32	1.27	1.21	1.33	1.31	1.39
UV-PT9	10/5/2023 8:48	50%	50%	1,449	Auto	6	70.5%	130,000	98.55%	27.32	12.81	2.4	2.3	2.2	2.64	2.53	2.42	2.67	2.65	2.79
UV-PT10	10/5/2023 14:35	0%	100%	988	Manual	5	58.5%	130,000	98.82%	--		2.4	2.3	2.2	2.64	2.53	2.42	Manual	Manual	Manual
UV-PT11	10/5/2023 15:20	0%	100%	989	Auto	5	57%	124,000	98.82%	23.21	9.47	2.4	2.3	2.2	2.6	2.5	2.4	2.66	2.8	2.79
UV-PT12	9/22/2023 15:00	100%	0%	1,000	Auto	5	56.5%	130,000	97.73%	26.67	11.90	2.4	2.3	2.2	2.6	2.5	2.4	2.67	2.67	2.79
UV-PT13	9/22/2023 16:00	100%	0%	1,000	Auto	5	57.5%	124,000	97.53%	25.37	11.21	2.4	2.3	2.2	2.6	2.5	2.4	2.67	2.69	2.80
UV-PT14	10/4/2023 15:25	50%	50%	1,973	Auto	3	67.5%	90,000	98.57%	22.11	16.78	1.2	1.15	1.1	1.32	1.27	1.21	1.38	1.27	1.43
UV-PT15	10/4/2023 16:00	50%	50%	1,971	Auto	3	66.5%	90,000	98.64%	22.16	16.83	1.2	1.15	1.1	1.32	1.27	1.21	1.38	1.27	1.43
UV-PT16	10/3/2023 14:30	50%	50%	1,985	Auto	6	71.5%	130,000	98.63%	23.78		1.8	1.73	1.65	1.98	1.9	1.82	NA	NA	NA
UV-PT17	10/3/2023 14:53	50%	50%	1,990	Auto	6	77%	124,000	98.61%	23.07	12.00	1.8	1.73	1.65	1.98	1.9	1.82	NA	2.27	2.35
UV-PT18	10/4/2023 14:20	50%	50%	1,973	Auto	8	70%	130,000	98.64%	26.02	12.16	2.4	2.3	2.2	2.6	2.5	2.4	2.65	2.66	2.78
UV-PT19	10/4/2023 13:43	50%	50%	1,972	Auto	10	74.5%	130,000	96.02%	31.24	16.49	2.4	2.3	2.2	2.6	2.5	2.4	2.68	2.55	2.80
UV-PT20	10/4/2023 14:50	50%	50%	1,972	Auto	7	62.5%	90,000	98.49%	22.33	11.56	2.4	2.3	2.2	2.6	2.5	2.4	2.67	2.55	2.79

Table 5-3: Measured UVT and H₂O₂ results.

Test ID	UVT								Feed pH	Online H ₂ O ₂		Measured H ₂ O ₂	
	Online (Optiview) Pre-H ₂ O ₂	Measured UV Inf Pre-H ₂ O ₂	Measured UV Influent Post-H ₂ O ₂	PLC Calculated Inf. UVT (Online + H ₂ O ₂)	Calculated Background Inf UVT (Inf UVT - H ₂ O ₂)	PLC Calculated Eff. UVT (Online + Residual H ₂ O ₂)	Measured UV Effluent	Calculated Background Eff UVT (Eff UVT - H ₂ O ₂)		PLC Requested Dose	PLC Calculated Residual	UV Influent (S9)	UV Effluent (S10)
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)		(SU)	(mg/L)	(mg/L)	(mg/L)
UV-PTC1	97.80%	98.25%	93.22%	92.79%	98.2%	92.8%	93.20%	98.3%	7.06	39.60	39.60	39.6	40.5
UV-PTC2	97.61%	98.00%	98.00%	97.61%	98.0%	97.6%	98.23%	98.2%	7.02	0.00	0.00	0.0	0.0
UV-PT1	95.64%	95.77%	90.59%	90.73%	95.6%	N.A.	94.55%	97.5%	7.03	39.73	N.A.	40.8	23.3
UV-PT2	95.69%	95.66%	90.42%	90.78%	95.5%	N.A.	94.56%	97.5%	7.02	39.70	N.A.	41.2	23.0
UV-PT3	95.76%	95.76%	90.98%	91.17%	95.7%	N.A.	94.92%	97.6%	7.02	36.98	N.A.	37.9	21.3
UV-PT4	95.89%	95.80%	91.84%	92.06%	95.7%	93.9%	95.22%	97.6%	6.95	30.71	16.13	30.7	18.2
UV-PT5	93.45%	92.97%	88.64%	88.82%	93.2%	90.8%	92.80%	95.7%	7.11	38.30	21.38	37.4	23.0
UV-PT6	98.54%	98.59%	94.88%	94.87%	98.6%	96.7%	97.04%	99.3%	7.10	28.59	14.18	29.3	17.0
UV-PT7	98.45%	98.48%	95.47%	95.43%	98.5%	96.3%	96.63%	99.1%	6.90	23.44	16.97	23.5	18.7
UV-PT8	98.62%	98.58%	95.83%	95.76%	98.6%	96.5%	96.87%	99.1%	6.91	22.19	16.02	21.6	16.8
UV-PT9	98.55%	98.35%	94.83%	95.04%	98.5%	96.9%	97.29%	99.2%	6.83	27.32	12.81	28.3	14.9
UV-PT10	98.82%	98.85%	95.42%	95.26%	99.0%	N.A.	97.61%	99.7%	6.87	N.A.	N.A.	27.7	15.7
UV-PT11	98.82%	98.86%	95.77%	95.82%	99.0%	97.6%	97.89%	99.5%	6.85	23.21	9.47	24.7	12.0
UV-PT12	97.73%	97.60%	94.73%	94.33%	98.3%	96.2%	97.61%	99.3%	6.83	26.67	11.90	28.1	13.2
UV-PT13	97.53%	97.60%	94.85%	94.30%	98.1%	96.1%	97.54%	99.1%	6.97	25.37	11.21	25.4	12.0
UV-PT14	98.57%	98.69%	95.72%	95.72%	98.8%	96.4%	96.70%	99.3%	6.50	22.11	16.78	24.0	19.7
UV-PT15	98.64%	98.62%	95.67%	95.78%	98.8%	96.5%	96.67%	99.2%	6.60	22.16	16.83	24.0	19.2
UV-PT16	N.A.	98.61%	95.49%	N.A.	98.6%	N.A.	97.23%	99.3%	7.04	N.A.	N.A.	24.2	15.8
UV-PT17	98.61%	98.63%	95.54%	95.64%	98.6%	97.1%	97.45%	99.3%	6.92	23.07	12.00	24.0	14.2
UV-PT18	98.64%	98.64%	95.16%	95.29%	98.6%	97.1%	97.29%	99.2%	6.52	26.02	12.16	26.9	14.9
UV-PT19	96.02%	96.03%	91.92%	92.12%	95.9%	93.9%	95.42%	97.8%	6.52	31.24	16.49	31.7	18.7
UV-PT20	98.49%	98.66%	95.67%	95.61%	98.7%	97.0%	97.44%	99.3%	6.50	22.33	11.56	23.7	14.4

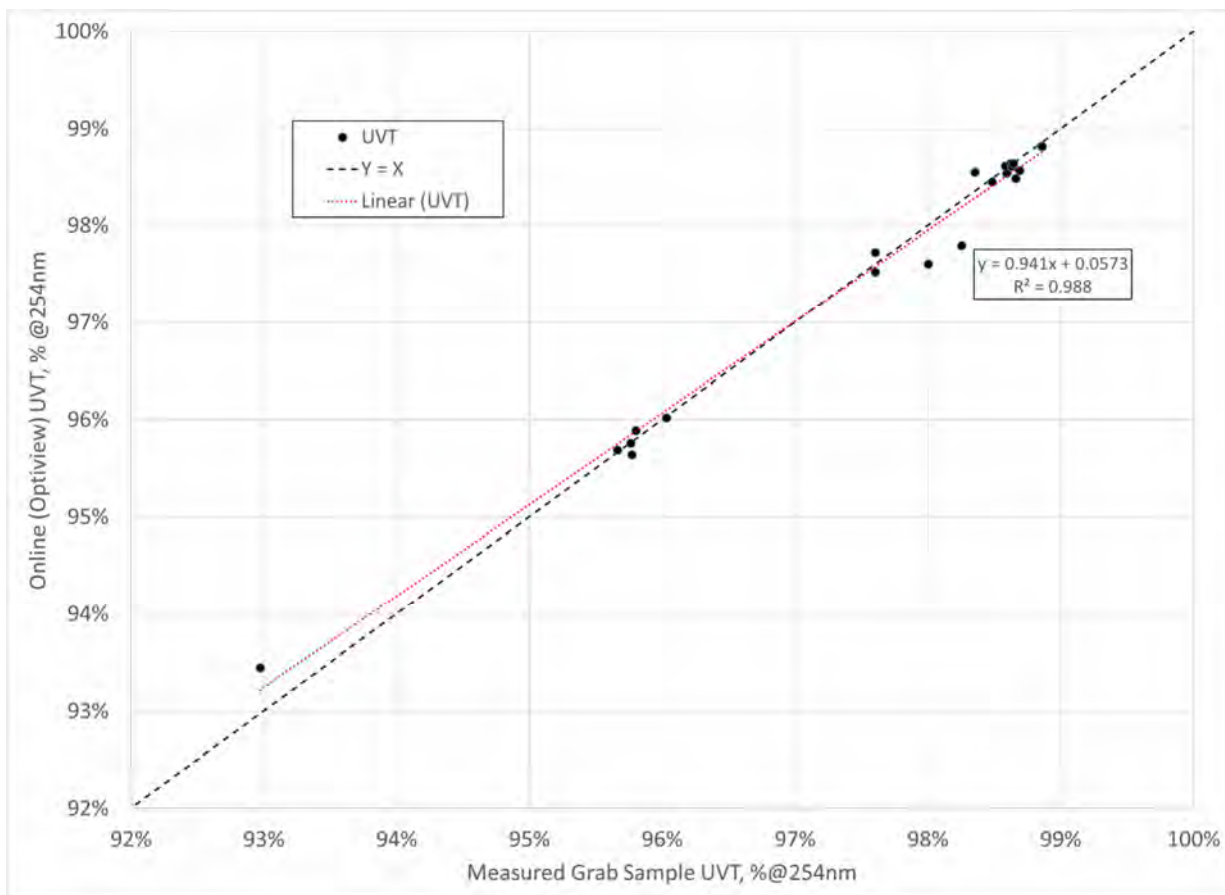


Figure 5-2: Comparison between online UVT and measured background UVT.

The experimental data presented in Table 5-3 were also used to demonstrate how accurately the UV system control algorithm predicts the UV influent and UV effluent UVTs. The control algorithm calculates the UV influent UVT from the online UVT value and the H₂O₂ concentration. To exemplify, the control algorithm equation was used with the online pre-H₂O₂ UVTs with the PLC-requested H₂O₂ concentrations to calculate the UV influent UVT. A similar approach was used to calculate the UV effluent UVTs, that is, taking the online UVT adjusted for the PLC-calculated residual H₂O₂ concentration. These calculated UVT values are included in Table 5-3. The calculations assume that no or negligible changes would occur in the water background UVT during the UV/AOP treatment. Figure 5-3 (A) shows the comparison between measured UV influent UVTs and PLC-calculated UV influent UVTs. The agreement is very good for the UV influent data, thereby providing confidence in the calculation method used by the system controls to predict the influent UVT. Figure 5-3 (B) shows the comparison between measured UV effluent UVTs and PLC-calculated UV effluent UVTs. While the calculated effluent UVT trends well with the measured values, all measured effluent UVT values are higher than the predicted values and the discrepancy is greater for the lower UVT test conditions. This discrepancy corresponds to the observed increase in the background UVT across the reactor discussed above. The UVT modifier (Aqua Hume) is not a naturally occurring

constituent of the well water; thus, the UVT changes observed in the Aqua Hume-spiked tests are not representative to treatment conditions of typical well water.

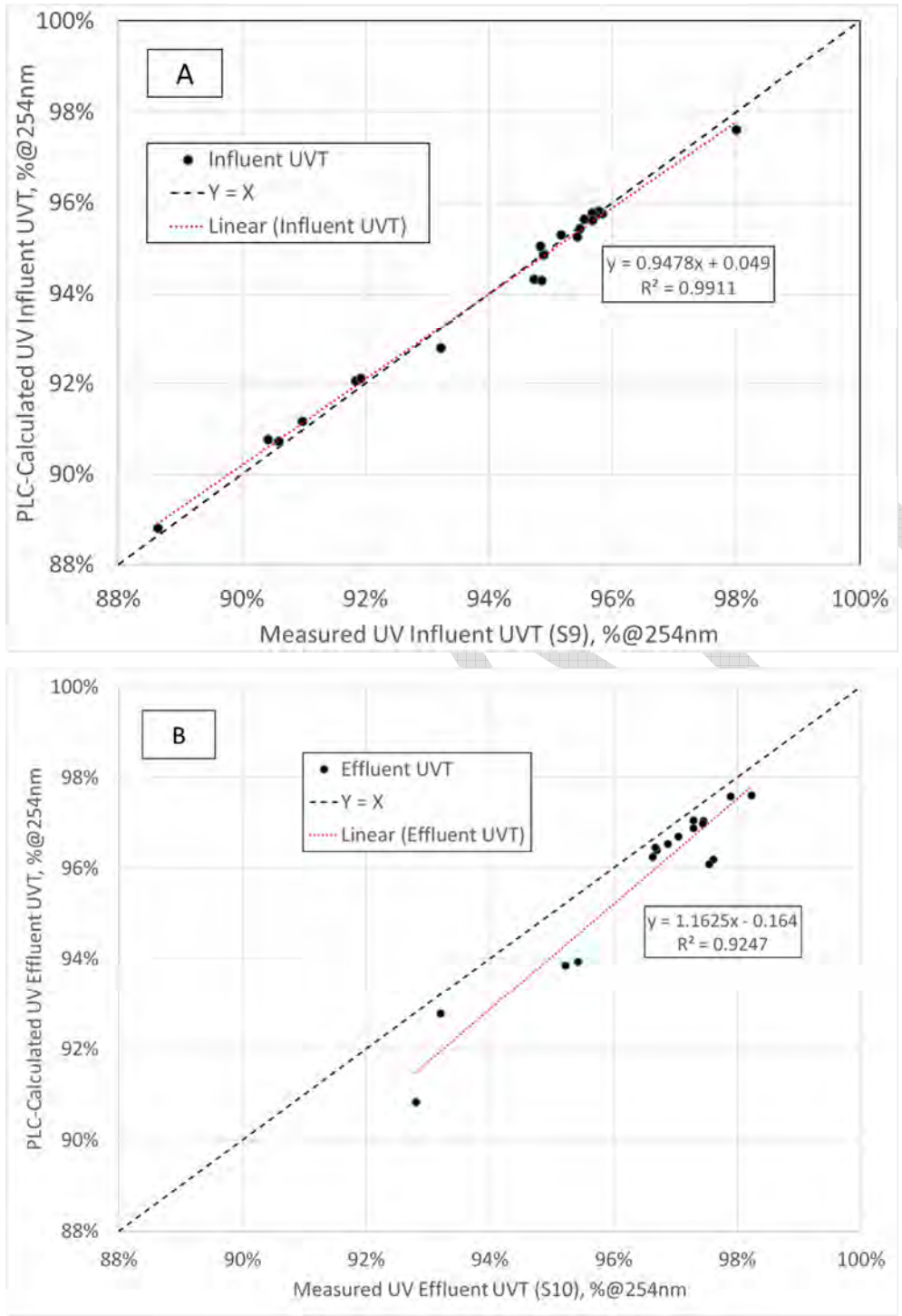


Figure 5-3: Comparison between measured and PLC-Calculated UVT

Hydrogen peroxide Measurements and PLC calculations

The PLC-requested UV influent H₂O₂ concentrations and PLC-predicted residual (i.e., UV effluent) H₂O₂ concentrations are plotted against the measured values in Figure 5-4. The measured H₂O₂ values plotted in Figure 5-4 are the results of the influent and effluent grab sample measurements. The PLC-calculated influent H₂O₂ concentrations for tests 10 and 16 were inadvertently not recorded. Also, the PLC-predicted H₂O₂ residuals were not available for the manual tests 1 to 3, 10, and 16. Figure 5-4 demonstrates very good agreement between the predicted and measured data. The excellent agreement between the predicted and measured influent H₂O₂ concentrations provides confidence in the reliance on the predicted concentrations in the absence of a reliable online analytical instrument. The PLC calculates the UV effluent H₂O₂ concentration based on the UV influent concentration and the predicted H₂O₂ destruction through the reactor. The UV influent and effluent H₂O₂ concentrations are then used to determine the average H₂O₂ concentration through the UV chamber, and subsequently the contaminant log reductions. Figure 5-4 shows that while the measured and PLC-predicted UV effluent H₂O₂ concentrations trend very well, the measured UV effluent H₂O₂ concentrations are consistently slightly higher than the predicted effluent concentrations. The impact of that underpredicted effluent H₂O₂ concentration is to add some conservatism to the predicted contaminant treatment.

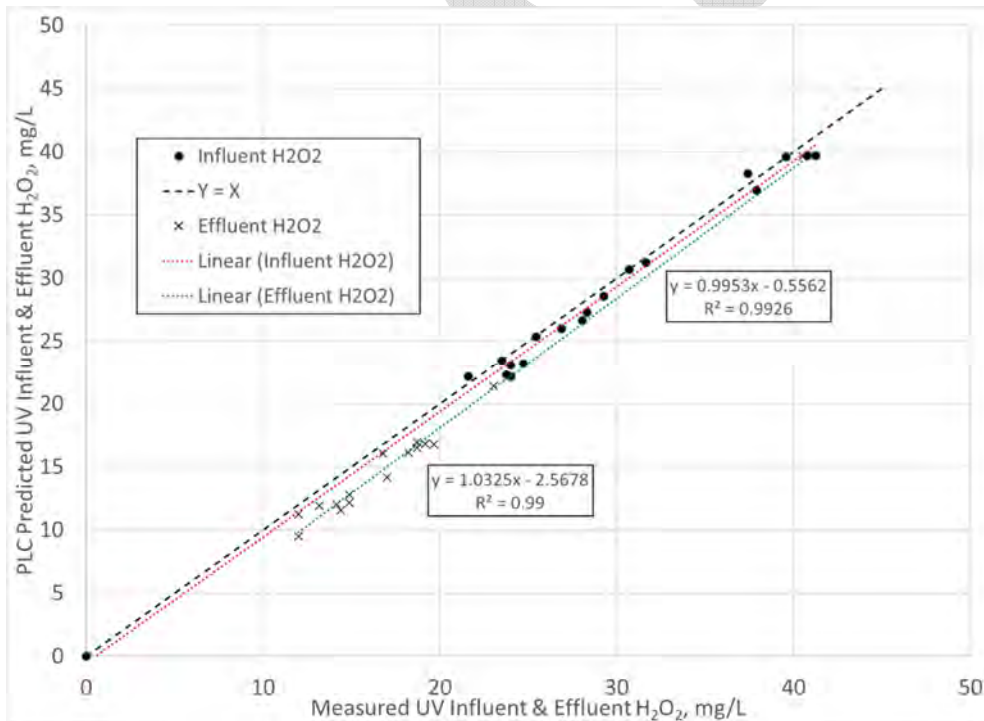


Figure 5-4: Comparison between measured and PLC H₂O₂ concentrations.

5.4 TARGET CONTAMINANT TREATMENT

Table 5-5 lists the 1,4-dioxane data reported by Weck Laboratories, while the TCE and PCE analytical data are reported in Tables 5-6 and 5-7, respectively. As well as the analytical data

reported by Weck for the duplicate influent and effluent samples, these tables also list the relative standard deviation (RSD) of the duplicate analyses and the average contaminant log reduction for each test. The average log reduction is calculated by taking the log of the average influent concentration divided by the average effluent concentration (i.e., $\text{Log}(\text{avg inf}/\text{avg eff})$). The PLC-entered compliance and operating LR setpoints as well as the PLC-predicted LRs for each test are also included.

All UV influent and effluent 1,4-dioxane concentrations were >MDL for all tests and therefore a quantifiable LR value can be reported for each test. Table 5-5 shows that the influent 1,4-dioxane concentrations ranged from 19 $\mu\text{g}/\text{L}$ to 470 $\mu\text{g}/\text{L}$, while the effluent concentrations ranged from 0.043 $\mu\text{g}/\text{L}$ to 2.5 $\mu\text{g}/\text{L}$, except for the control tests. Recall that 1,4-dioxane was spiked into the UV influent stream at concentrations sufficient to produce UV effluent concentrations that were greater than the MRL. The RSD of the influent duplicates ranged from 0% to 19% for the non-control tests and were all considered acceptable. However, the RSD for the effluent duplicates ranged from 0% to 108% with the effluent results for tests 6 and 16 having RSD values >100%. Looking closer at those test results, it is recommended to consider the Test 6 effluent result of 2.2 $\mu\text{g}/\text{L}$ as an anomaly and to use the other replicate value of 0.37 $\mu\text{g}/\text{L}$ as the true value. Recalculating the 1,4-dioxane LR for Test 6 results in the value increasing from the average LR of 2.46 to 3.0 using the 0.37 $\mu\text{g}/\text{L}$ effluent result. Similarly, for Test 16 it is recommended to consider the effluent result of 2.4 $\mu\text{g}/\text{L}$ as an anomaly and to instead rely on the 0.32 $\mu\text{g}/\text{L}$ result as the true value. That results in the 1,4-dioxane LR value for Test 16 increasing from 2.46 to 3.08. Other than those two tests with effluent RSD values >100%, the average UV effluent RSD of the 1,4-dioxane analyses for all other tests was 14% and this is considered to be acceptable. The results of the two control tests for which the 1,4-dioxane LRs were reported as 0.00 and 0.03 confirm that treatment is not provided in the absence of both UV energy and H_2O_2 together. We can also conclude from these control test results that the sampling and analytical methods do not contribute to anomalous results.

The analytical test results for PCE and TCE provided in Tables 5-6 and 5-7 respectively are quite different than those for 1,4-dioxane, where quantifiable 1,4-dioxane amounts were in the UV effluent samples. That is because these contaminants were not spiked into the influent stream. The average measured UV influent PCE concentration for the tests treating a 50% blend of wells SM-8 and SM-9 was 13.6 $\mu\text{g}/\text{L}$, whereas the result for SM-8 only was 2.0 $\mu\text{g}/\text{L}$ and that for well SM-9 only was 27 $\mu\text{g}/\text{L}$. All UV effluent PCE concentration results were less than the MDL of 0.18 $\mu\text{g}/\text{L}$ except for tests C1, 7, 8, 14 and 15, which targeted low treatment levels. The LRs reported in tables 5-5, 5-6 and 5-7 are calculated for each individual test as the $\text{Log}([\text{inf}]/[\text{eff}])$ where the [inf] term is the average UV influent concentration of the replicate samples and the [eff] term is the average UV effluent concentration of the replicate samples. To calculate the contaminant LR in tests where PCE and TCE in the effluent sample were reported as below the MDL, the MDL value (e.g., 0.18 $\mu\text{g}/\text{L}$ for PCE & TCE) was used in the calculation of the average effluent concentration. Since the true concentration value could be less than the MDL, the resulting LR calculations are considered to be conservative.

It is noteworthy that while control test C1 with approximately 40 mg/L H_2O_2 but no UV resulted in no treatment of PCE, control test C2 with all lamps at 100% BPL but no H_2O_2 produced >1.9 LR based on an effluent concentration of <0.18 $\mu\text{g}/\text{L}$. That demonstrates that the contributions to PCE LR from direct UV photolysis are significant.

The average measured UV influent TCE concentration for the tests treating a 50% blend of wells SM-8 and SM-9 was 32 $\mu\text{g/L}$, whereas the result for SM-8 only was 80 $\mu\text{g/L}$ and that for well SM-9 only was 1.8 $\mu\text{g/L}$. All UV effluent TCE concentration results were less than the MDL of 0.18 $\mu\text{g/L}$ except for tests C1, C2, 7, 8, 14 and 15, which targeted low treatment levels. It is noteworthy that while control test C1 with approximately 40 mg/L H_2O_2 but no UV resulted in no treatment of TCE, control test C2 with all lamps at 100% BPL but no H_2O_2 produced 0.4 LR. That demonstrates the expected result that direct UV photolysis of TCE is much less significant than that of PCE, but needs to be considered. This observation is also consistent with the photolysis quantum yields reported in the literature for PCE and TCE.

Table 5-5: 1,4-Dioxane data for each test.

Test ID	Date/Time	1,4-Dioxane ($\mu\text{g/L}$)									
		Compliance Setpoint	Operating Setpoint	PLC Predicted	UV Feed		RSD of Influent Samples	UV Effluent		RSD of Effluent Samples	Average Log Reduction
		(log)	(log)	(log)	Replicate 1	Replicate 2	(%)	Replicate 1	Replicate 2	(%)	
UV-PTC1	10/2/2023 13:10	Manual	Manual	Manual	27	19	25%	23	28	14%	0.00
UV-PTC2	10/2/2023 14:37	Manual	Manual	Manual	23	24	3%	22	22	0%	0.03
UV-PT1	10/2/2023 15:35	Manual	Manual	Manual	340	260	19%	0.073	0.08	6%	3.59
UV-PT2	10/2/2023 15:40	Manual	Manual	Manual	280	280	0%	0.057	0.043	20%	3.75
UV-PT3	10/2/2023 16:22	Manual	Manual	Manual	290	300	2%	0.12	0.073	34%	3.49
UV-PT4	10/3/2023 10:45	2.4	2.64	2.66	330	340	2%	0.46	0.3	30%	2.95
UV-PT5	10/3/2023 11:30	2.4	2.64	2.76	290	240	13%	0.14	0.11	17%	3.33
UV-PT6	10/3/2023 14:45	2.4	2.64	2.65	370	370	0%	0.37	2.2	101%	2.46 (3.00)
UV-PT7	10/4/2023 8:50	1.2	1.32	1.33	24	28	11%	1.6	1.5	5%	1.22
UV-PT8	10/4/2023 9:10	1.2	1.32	1.33	26	25	3%	1.7	1.5	9%	1.20
UV-PT9	10/5/2023 20:48	2.4	2.64	2.67	350	320	6%	0.3	0.36	13%	3.01
UV-PT10	10/5/2023 14:35	2.4	2.64	Manual	120	120	0%	0.16	0.12	20%	2.93
UV-PT11	10/5/2023 15:20	2.4	2.6	2.66	150	120	16%	0.17	0.2	11%	2.86
UV-PT12	9/22/2023 15:00	2.4	2.6	2.67	190	160	12%	0.052	0.060	10%	3.49
UV-PT13	9/22/2023 16:00	2.4	2.6	2.67	160	160	0%	0.061	0.049	15%	3.46
UV-PT14	10/4/2023 15:25	1.2	1.32	1.38	30	29	2%	2.5	2.2	9%	1.10
UV-PT15	10/4/2023 16:00	1.2	1.32	1.38	27	25	5%	1.9	1.2	32%	1.22
UV-PT16	10/3/2023 14:30	1.8	1.98	NA	390	390	0%	2.4	0.32	108%	2.46 (3.08)
UV-PT17	10/3/2023 14:53	1.8	1.98	NA	85	90	4%	0.32	0.25	17%	2.49
UV-PT18	10/4/2023 14:20	2.4	2.6	2.65	380	470	15%	0.14	0.16	9%	3.45
UV-PT19	10/4/2023 13:53	2.4	2.6	2.68	330	360	6%	0.095	0.076	16%	3.61
UV-PT20	10/4/2023 14:50	2.4	2.6	2.67	210	190	7%	0.34	0.34	0%	2.77

Values in red font highlight anomalous analytical results and the expected true LR while bold LR values highlight LRs below the compliance target.

Table 5-6: PCE data for each test.

Test ID	Date/Time	PCE (µg/L)							
		Compliance Setpoint	Operating Setpoint	PLC Predicted	UV Feed		UV Effluent		Average Log Removal
		(log)	(log)	(log)	Replicate 1	Replicate 2	Replicate 1	Replicate 2	
UV-PTC1	10/2/2023 13:10	Manual	Manual	Manual	14	--	14	--	0.00
UV-PTC2	10/2/2023 14:37	Manual	Manual	2.38	13	--	< 0.18	--	> 1.9
UV-PT1	10/2/2023 15:35	Manual	Manual	Manual	14	--	< 0.18	--	> 1.9
UV-PT2	10/2/2023 15:40	Manual	Manual	Manual	14	--	< 0.18	--	> 1.9
UV-PT3	10/2/2023 16:22	Manual	Manual	Manual	13	--	< 0.18	--	> 1.9
UV-PT4	10/3/2023 10:45	2.3	2.53	2.55	13	--	< 0.18	< 0.18	> 1.9
UV-PT5	10/3/2023 11:30	2.3	2.53	2.54	11	--	< 0.18	--	> 1.9
UV-PT6	10/3/2023 14:45	2.3	2.53	2.59	12	--	< 0.18	--	> 1.9
UV-PT7	10/4/2023 8:50	1.15	1.27	1.30	14	--	0.88	--	1.20
UV-PT8	10/4/2023 9:10	1.15	1.27	1.31	14	15	1.1	0.94	1.15
UV-PT9	10/5/2023 20:48	2.3	2.53	2.65	16	--	< 0.18	--	> 1.9
UV-PT10	10/5/2023 14:35	2.3	2.53	Manual	28	--	0.26	--	2.03
UV-PT11	10/5/2023 15:20	2.3	2.5	2.75	26	--	< 0.18	--	> 2.2
UV-PT12	9/22/2023 15:00	2.3	2.5	2.67	2.1	--	< 0.18	--	> 1.9
UV-PT13	9/22/2023 16:00	2.3	2.5	2.69	1.9	--	< 0.18	--	> 1.9
UV-PT14	10/4/2023 15:25	1.15	1.27	1.27	15	--	1.3	--	1.06
UV-PT15	10/4/2023 16:00	1.15	1.27	1.27	15	--	1.3	--	1.06
UV-PT16	10/3/2023 14:30	1.73	1.9	NA	11	--	< 0.18	--	> 1.9
UV-PT17	10/3/2023 14:53	1.73	1.9	2.27	13	--	< 0.18	--	> 1.9
UV-PT18	10/4/2023 14:20	2.3	2.5	2.66	13	--	< 0.18	--	> 1.9
UV-PT19	10/4/2023 13:53	2.3	2.5	2.55	14	--	< 0.18	--	> 1.9
UV-PT20	10/4/2023 14:50	2.3	2.5	2.55	16	--	< 0.18	--	> 1.9

Bold LR values highlight LRs below the compliance target.

Table 5-7: TCE data for each test.

Test ID	Date/Time	TCE (µg/L)							Average Log Removal
		Compliance Setpoint	Operating Setpoint	PLC Predicted	UV Feed		UV Effluent		
		(log)	(log)	(log)	Replicate 1	Replicate 2	Replicate 1	Replicate 2	
UV-PTC1	10/2/2023 13:10	Manual	Manual	Manual	32	--	32	--	0.00
UV-PTC2	10/2/2023 14:37	Manual	Manual	0.1	34	--	15	--	0.36
UV-PT1	10/2/2023 15:35	Manual	Manual	Manual	31	--	< 0.18	--	> 2.2
UV-PT2	10/2/2023 15:40	Manual	Manual	Manual	31	--	< 0.18	--	> 2.2
UV-PT3	10/2/2023 16:22	Manual	Manual	Manual	30	--	< 0.18	--	> 2.2
UV-PT4	10/3/2023 10:45	2.2	2.42	2.78	29	--	< 0.18	< 0.18	> 2.2
UV-PT5	10/3/2023 11:30	2.2	2.42	2.87	27	--	< 0.18	--	> 2.2
UV-PT6	10/3/2023 14:45	2.2	2.42	2.77	27	--	< 0.18	--	> 2.2
UV-PT7	10/4/2023 8:50	1.1	1.21	1.39	37	--	0.45	--	1.91
UV-PT8	10/4/2023 9:10	1.1	1.21	1.39	35	35	0.52	0.51	1.83
UV-PT9	10/5/2023 20:48	2.2	2.42	2.79	33	--	< 0.18	--	> 2.2
UV-PT10	10/5/2023 14:35	2.2	2.42	Manual	2	--	< 0.18	--	> 1.0
UV-PT11	10/5/2023 15:20	2.2	2.4	2.79	1.6	--	< 0.18	--	> 0.9
UV-PT12	9/22/2023 15:00	2.2	2.4	2.79	82	--	< 0.18	--	> 2.2
UV-PT13	9/22/2023 16:00	2.2	2.4	2.80	78	--	< 0.18	--	> 2.2
UV-PT14	10/4/2023 15:25	1.1	1.21	1.43	37	--	0.61	--	1.78
UV-PT15	10/4/2023 16:00	1.1	1.21	1.43	35	--	0.65	--	1.73
UV-PT16	10/3/2023 14:30	1.65	1.82	NA	28	--	< 0.18	--	> 2.2
UV-PT17	10/3/2023 14:53	1.65	1.82	2.35	30	--	< 0.18	--	> 2.2
UV-PT18	10/4/2023 14:20	2.2	2.4	2.78	32	--	< 0.18	--	> 2.2
UV-PT19	10/4/2023 13:53	2.2	2.4	2.80	34	--	< 0.18	--	> 2.3
UV-PT20	10/4/2023 14:50	2.2	2.4	2.79	36	--	< 0.18	--	> 2.3

1,4-Dioxane Spiking

Given the significant range of expected treatment levels, the spiked concentration of 1,4-dioxane was varied from test to test to target an effluent concentration of around 0.1 µg/L. The measured concentrations of 1,4-dioxane in the UV influent samples should represent the sum of the spiked concentrations and the ambient 1,4-dioxane concentrations in the groundwater. Figure 5-5 compares the calculated spiked concentration to the measured UV influent concentration for each test to demonstrate the correlation. Note that tests C1, C2, 7, 8, 14 and 15 targeted spike levels between 1 µg/L and 6.4 µg/L, given their relatively low target LRs. Those low spike levels were achieved using a 1,4-dioxane stock concentration of 6.2 g/L, whereas all remaining tests used a 1,4-dioxane stock concentration of 146 g/L. Given that the four UV influent samples for the control tests (i.e., C1 & C2) averaged 23 µg/L 1,4-dioxane and only 1 µg/L was spiked. From this it is estimated that the ~50:50 blend of SM-8 and SM-9 well water contained approximately 22 µg/L 1,4-dioxane. Therefore, the ideal result for Figure 5-5 would see all data points in a parallel line below the line of Y = X and offset to the right by 22 µg/L. While there are variable results, Figure 5-5 shows the linear regression line of the data points to almost exactly matched that ideal result. That is, the slope of the regression line is >0.99 with an X-intercept of -23 µg/L. It is suggested that the observed variability is likely due primarily to analytical variability.

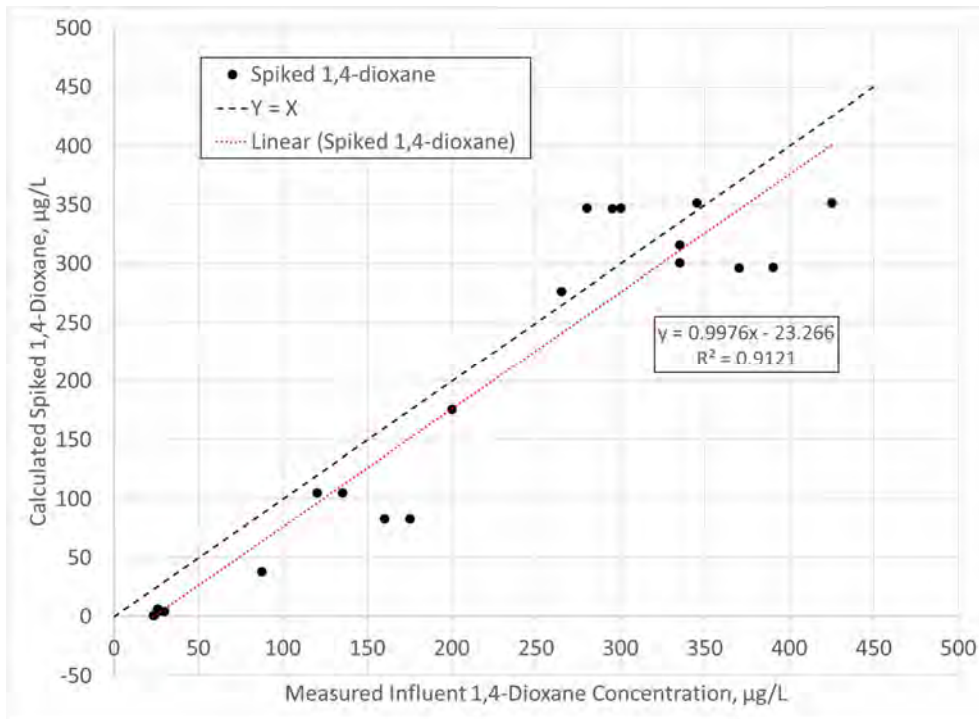


Figure 5-5: Measured UV Influent Contaminant Concentrations versus Calculated Concentrations

Comparison of Measured and Target Contaminant Log Reductions

The 1,4-dioxane compliance and operating LR setpoints, PLC-predicted LRs, and measured LRs that are provided in Table 5-5 are plotted in Figure 5-6. The measured LRs are represented by the blue bars and the arrows above those for tests 6 and 16 are to indicate that the true measured LRs should likely be 3.0 and 3.08, respectively, as discussed above. The associated compliance and operating LR setpoints as well as the PLC-predicted LR values are represented by the red, green, and purple bars. The compliance LR setpoints were selected according to the test matrix presented in Table 4-1, whereas the operating setpoints were set to be 10% higher than the compliance level. The UV system PLC will operate the system to target the operating LR setpoints for the three controlling contaminants (e.g., 1,4-dioxane, PCE & TCE). Thus, the operating setpoint represents an adjustable operational conservatism relative to the compliance setpoint. The PLC-predicted LRs are calculated by the PLC based on the live online inputs of flow, UVT, H₂O₂ dose, UVI data and number of operating lamp sections, plus the manually entered hydroxyl radical ST and nitrate level as well as the kinetic parameters for each contaminant. As previously described, predicted LRs are not available for all manual mode runs. Furthermore, LR setpoints are irrelevant for manual mode runs since the PLC is not controlling to them. Most tests had a 1,4-dioxane compliance LR setpoint at the design value of 2.4 with the operating target at 2.64. The PLC-predicted LRs are just slightly above the operating target for all those tests, as expected.

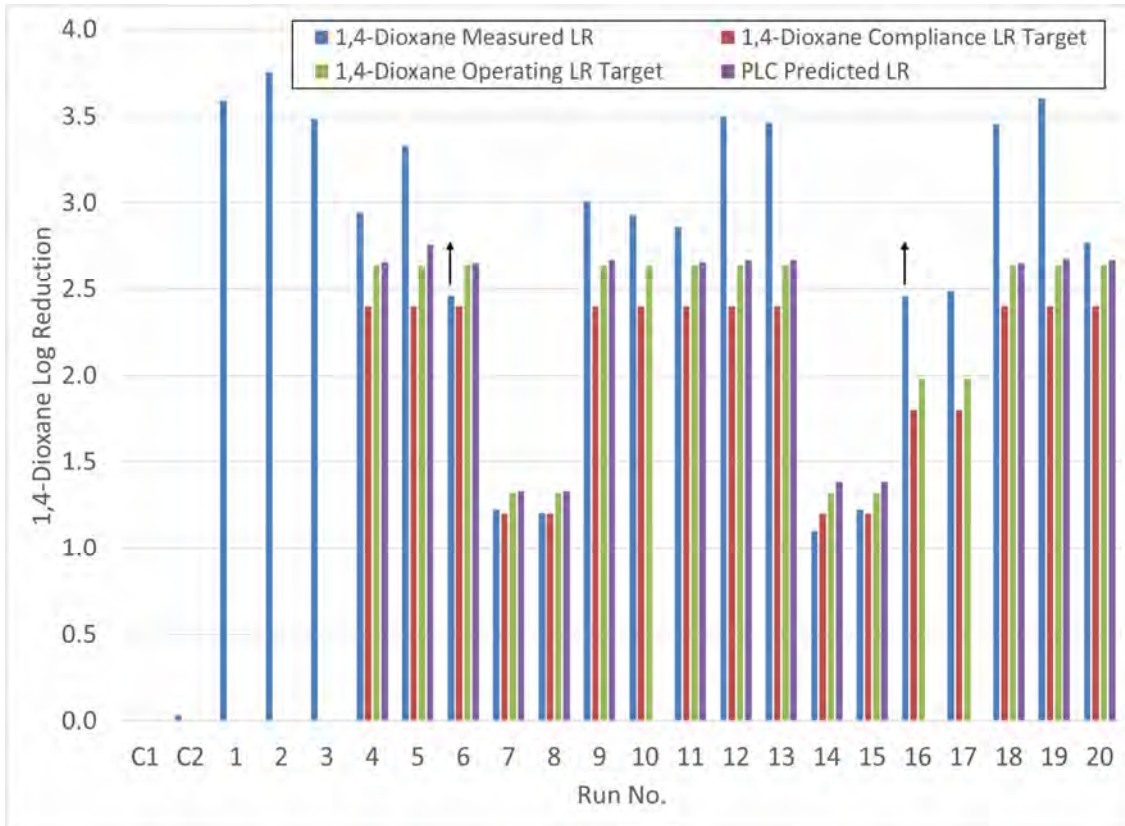


Figure 5-6: 1,4-Dioxane Log Reduction Values: Comparison of Measured, Target and Predicted Values.

Table 5-5 and Figures 5-6 demonstrate that the measured 1,4-dioxane LR values exceeded the target and predicted values for all tests except runs 7, 8, 14 and 15. For those four tests, which had a reduced 1,4-dioxane LR target of 1.2, 3 of the 4 runs met or exceeded the compliance target, while test 14 achieved 92% of the compliance target LR (i.e., 1.1 vs 1.2). Tests 14 and 15 are duplicate tests with the same operating conditions and treatment targets. Nevertheless, run 15 measured 1.22 LR 1,4-dioxane while run 14 measured 1.1 LR. This relatively minor discrepancy is likely due to analytical uncertainty as the range of LRs calculated from both sets of analytical data (i.e., both tests 14 & 15) is from 1.0 to 1.4. As listed in Table 5-2, tests 14 and 15 were performed with the pH reduced to 6.5, which was expected to have an associated reduced ST. As such, the ST entered into the PLC for those tests was 90,000 s⁻¹ whereas the measured ST value was slightly lower as presented in Table 5-1. To reiterate, the “measured” ST value corresponds to PT20 pre-H₂O₂ sample associated with test PT20 which was run on the same day as tests PT14 and PT15, but earlier in the day.

Another means of viewing the comparison between target and measured LR values is the X-Y plot presented in Figure 5-7. In this figure the measured 1,4-dioxane LR values are compared to both the compliance LR setpoint and the operating LR setpoint. Data points below the line of unity (i.e., Y = X) represent test conditions where the measured LR exceeded the setpoint target. Figure 5-7 presents a clearer view of the overall performance that was described in run-by-run detail in Figure 5-6. That is, Figure 5-7 shows that 13 of the 17 runs performed in ‘auto’ control mode exceeded both the compliance and operating LR targets. Furthermore, of the 4

data demonstrated it to be greater than 1.9, with an effluent PCE concentration less than the MDL.

As shown in Table 5-6 and Figure 5-8 it cannot be definitively concluded that the measured PCE LR values exceeded the target and predicted values because most tests produced effluent PCE concentrations below the MDL of 0.18 $\mu\text{g/L}$. During the planning phase of this work, Trojan prepared a document titled “*Rationale for Proposing 1,4-Dioxane Removal Yield as an Indicator for Tetrachloroethene (PCE) and Trichloroethene (TCE) Removal Efficiency from Groundwater with the UV/H₂O₂ AOP at Water Treatment Facilities*”. This document explains how the known photochemical kinetic parameters for 1,4-dioxane, PCE and TCE can be applied together with the water quality parameters to calculate their fluence-based rate constants and that the LR ratios of the contaminants are proportional to these rate constants. For example, in that document, it was concluded that the LR ratio would be 1.00:1.00:1.22 for 1,4-dioxane:PCE:TCE when treating the design water quality (i.e., $ST=130,000\text{ s}^{-1}$; NO_3^- 35 mg/L) at the reactor average H_2O_2 dose of 31 mg/L. The Trojan PLC program and Trojan’s offline kinetic model have the photochemical kinetic parameters and fluence-based rate constant equation incorporated as part of the calculations. One discrepancy between these models and the referenced document is that they use the lowest reported value for the rate constant for the reaction of OH radicals with PCE (i.e., $2.0\text{E}+09\text{ M}^{-1}\text{s}^{-1}$) as opposed to the average value (i.e., $2.33\pm 0.41\text{E}+09\text{ M}^{-1}\text{s}^{-1}$) and so the models are more conservative with respect to PCE treatment when compared with the predictions in the document. Similarly, the kinetic models also use a more conservative OH radical rate constant for TCE (i.e., $2.9\text{E}+09\text{ M}^{-1}\text{s}^{-1}$) than the average value (i.e., $3.39\pm 0.70\text{E}+09\text{ M}^{-1}\text{s}^{-1}$) used in the document. Both of these models can be used to generate the expected ratio of PCE LR to 1,4-dioxane LR for each test condition. Using the offline kinetic model together with the measured water quality, this ratio ranged from 0.91 to 1.02 and was used to generate predicted PCE LRs based on the measured 1,4-dioxane LRs and these predicted PCE LRs are presented as the light blue bars in Figure 5-8. Recent literature studies showed that the superoxide radical anion ($\text{O}_2^{\bullet-}$) contributes to PCE and TCE degradation in H_2O_2 -catalyzed processes (Watts and Teel, 2019). In high alkalinity waters this radical reaches relatively high steady-state concentrations because it is formed from both OH and carbonate radical reactions with H_2O_2 . There are other routes to the formation of this radical, but of a minor importance. The reactions of with PCE and TCE are not included in Trojan’s kinetic model, as, to the best of our knowledge, no rate constants are available in the public domain.

The predicted PCE LR exceeds the operating setpoint for all tests for which the effluent PCE concentration was below the MDL. The measured effluent PCE concentration for run 10 was above the MDL and below the MRL and resulted in a measured LR of 2.03 whereas the compliance target was 2.3. It should be noted that analytical data that is below the MRL has a greater uncertainty associated with its quantification. Tests 10 and 11 were performed with well SM-9 only at a flow of 1,000 gpm. Run 10, which had a higher ST entered into the PLC, was performed with slightly higher UV power and higher H_2O_2 and so it should have provided more treatment than run 11, which produced an effluent PCE concentration below the MDL. The test 10 result also disagrees with the predicted PCE LR based on the measured 1,4-dioxane LR value. For all these reasons, the test 10 PCE result is considered to be an anomaly. Furthermore, similar to the 1,4-dioxane results, runs 7, 8, 14 and 15 did produce effluent PCE concentrations greater than the MDL and the resulting LRs were less than the predicted LRs. For those four tests which had a reduced PCE LR target of 1.15, 2 of the 4 runs met or exceeded the compliance

target while tests 14 and 15 achieved 92% of the compliance target LR (i.e., 1.06 vs 1.15). The predicted PCE LR based on the measured 1,4-dioxane LR are also lower than the operating target for all 4 runs and lower than the compliance target for run 14. The strong correlation between the measured and predicted LR for these runs provides confidence in those PCE LR predictions based on the measured 1,4-dioxane LR.

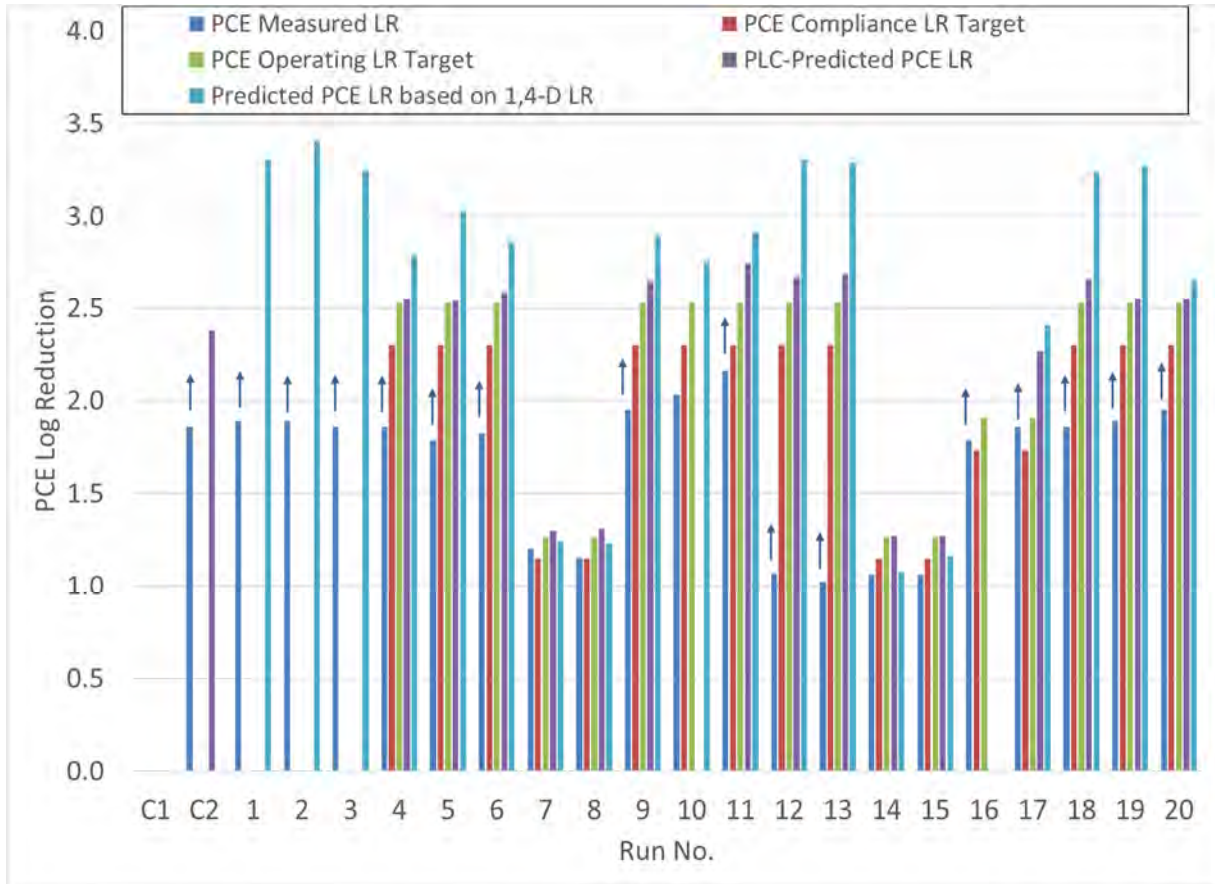


Figure 5-8: PCE Log Reduction Values: Comparison of Measured, Target and Predicted Values.

The TCE compliance and operating LR setpoints, PLC-predicted LR and measured LR values that are provided in Table 5-7 are plotted in Figure 5-8. The measured LR values are represented by the blue bars and the arrows above those bars are to indicate that the true measured LR values should likely be higher based on the measured effluent TCE concentrations being less than the MDL of 0.18 $\mu\text{g/L}$. The associated compliance and operating LR setpoints as well as the PLC-predicted LR values are represented by the red, green and purple bars. The compliance LR setpoints were selected according to the test matrix presented in Table 4-1 whereas the operating setpoints were set to be 10% higher than the compliance level. The PLC-predicted LR values are calculated by the PLC based on the live online inputs of flow, UVT, H_2O_2 dose, UVI data and number of operating lamp sections plus the manually entered hydroxyl radical ST and nitrate level. As previously described, the setpoint and predicted LR values are not available for all manual mode runs. Most tests had a TCE compliance LR setpoint at the design value of 2.2 with the

operating target at 2.44. The PLC-predicted LR for most runs are significantly above the operating target. 1,4-dioxane was the controlling contaminant for those runs and the associated predicted TCE LR value was higher than required. As shown in Table 5-7 and Figure 5-8 most tests produced effluent TCE concentrations below the MDL of 0.18 $\mu\text{g/L}$. Nevertheless, given the higher ambient concentration of TCE than PCE in the SM-8 well water, most tests were able to demonstrate that the compliance LR target was exceeded. That was also true for runs 7, 8, 14 and 15 which did produce effluent TCE concentrations greater than the MDL and the resulting LR values were significantly greater than the predicted LR values. As described for PCE above, the Trojan offline kinetic model was used to generate the expected ratio of TCE LR to 1,4-dioxane LR for each test condition. This ratio was pseudo-constant at 1.03 and was used to generate predicted TCE LR values based on the measured 1,4-dioxane LR values and these predicted TCE LR values are presented as the light blue bars in Figure 5-9. The predicted TCE LR exceeds the operating setpoint for all tests except tests 14 and 15 however, as noted above, the measured TCE LR values for tests 14 and 15 were greater than the operating setpoint and the PLC-predicted values. The overall conclusion regarding TCE treatment is that the compliance LR target is met or exceeded provided sufficient TCE is present to demonstrate the required LR. Only tests 10 and 11 were not able to definitively demonstrate that the compliance target was met because the influent TCE concentrations were too low.

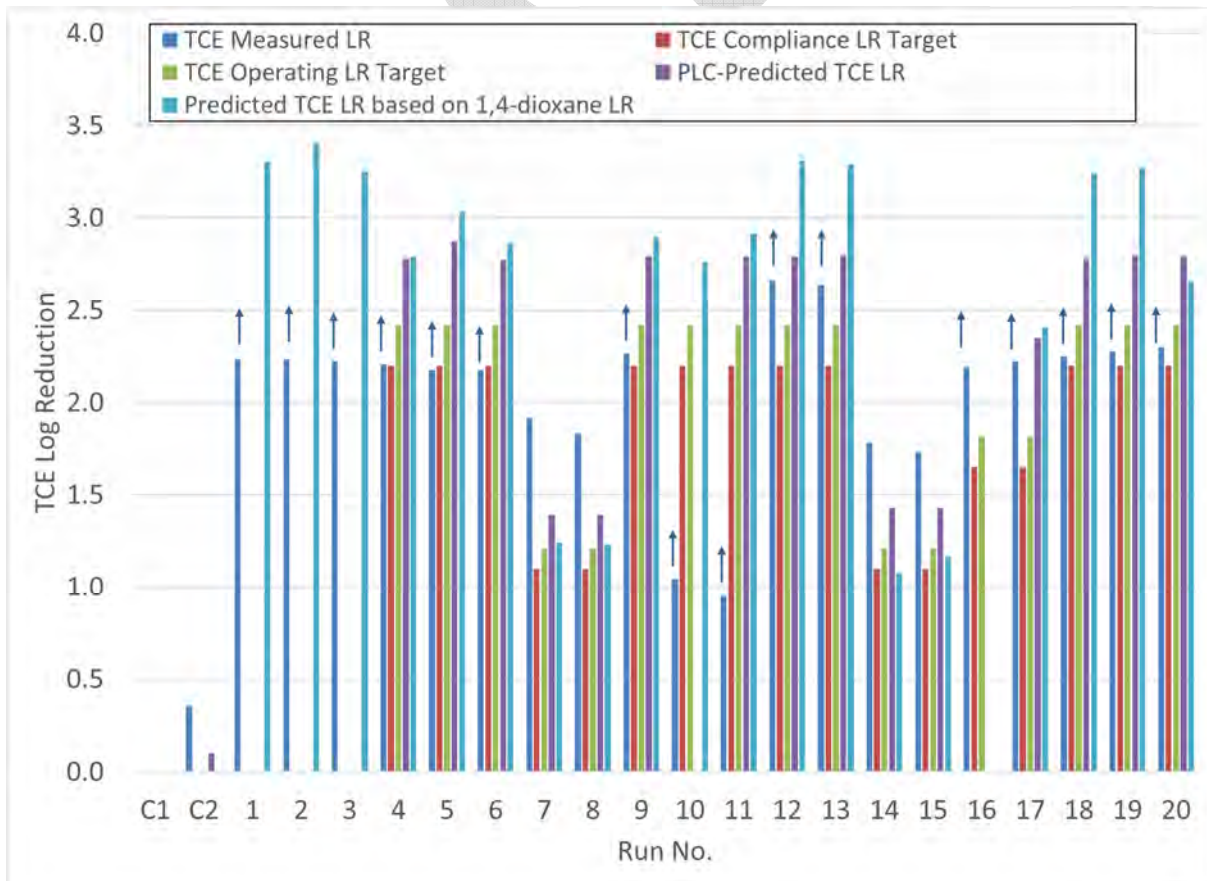


Figure 5-9: TCE Log Reduction Values: Comparison of Measured, Target and Predicted Values.

The overall conclusion from the data presented above is that the measured 1,4-dioxane LR values exceeded the operating LR setpoints for all tests for which the 1,4-dioxane compliance LR target was either the design value of 2.4 or the reduced value of 1.8. For those runs with a 1,4-dioxane compliance target of 1.2 LR, 3 of the 4 runs demonstrated 1,4-dioxane LRs that met or exceeded the compliance LR setpoint. Although tests 14 and 15 are duplicate test runs, only test 14 provided a measured 1,4-dioxane LR value below the compliance setpoint of 1.2 LR. Similarly, although only 6 of the 22 test conditions, including the control tests, produced effluent PCE concentrations >MDL, based on the measured 1,4-dioxane LRs and the predicted ratio of PCE:1,4-dioxane LR, all tests except test 14 are predicted to exceed the compliance setpoints. Only 6 of 22 test conditions produced effluent TCE concentrations >MDL nevertheless, ambient TCE concentrations were high enough to demonstrate that the compliance setpoint was met or exceeded for all tests.

Test runs 14, 15 and 20 were all performed at a reduced pH of ~6.5 and a ST of 90,000 s⁻¹ entered into the PLC. The measured 1,4-dioxane and PCE LRs for tests 14 and 15 did not exceed the operating target and run 20 only exceeded that LR target by <5%. While water samples for ST determination were not taken during tests 14 or 15, the sample taken following test 20 measured 85,300 s⁻¹ as reported in Table 5-1. It is suggested that this measured ST value, while apparently very accurate for test 20, underestimated the ST of the water for tests 14 and 15. Trojan has calculated that a ST value of 112,500 s⁻¹ entered into the UV PLC would have resulted in the contaminant LRs exceeding the operating target (i.e., 1.32 LR for 1,4-D & 1.27 for PCE) for those two runs.

The measured 1,4-dioxane and PCE LRs for tests 7 and 8 were also lower than their respective operating target setpoints. Although those tests were operated using the 50:50 well blend, there was not a specific water sample evaluated for ST for the water treated during tests 7 and 8. Of note, tests 7 and 8 were the first tests performed on October 4th (8:50 and 9:10), whereas tests 14 and 15 were the last tests performed that day (15:25 and 16:00). A few source water samples were collected from the greensand influent during the October Performance Testing by Brown and Caldwell and sent for analysis to Weck Laboratories. The nitrite data reported by Weck for these samples and the corresponding calculated contribution of nitrite to the ST are shown in Table 5-8.

Table 5-8: Nitrite data for source water samples and its contribution to ST

Sample ID	Date and time of sampling	Nitrite (ug/L as N)	ST(NO ₂ -), s-1
PT-SWC2-S4	10/2/2023 13:00	51	36429
PT-SW4-S4	10/3/2023 9:53	ND	NA
PT-SW8-S4	10/4/2023 9:17	50	35714
PT-SW9-S4	10/5/2023 8:50	ND	NA

The information provided in Table 5-8 indicates the well blend quality varies from one day to another, and this observation is supported by other analytes quantified in these samples and not shown herein. The only source water collected on October 4th is PT-SW8-S4 and the sampling was done right after completion of tests 7 and 8. As stated earlier, there was no sample collected

for ST determination at the same time with either PT-SW8-S4 or tests 7 or 8. Furthermore, the $ST(NO_2^-)$ of $35,714\ s^{-1}$ corresponding to the nitrite level of $50\ \mu g/L$ as N quantified in PT-SW8-S4 sample, is far too high to be part of (i.e., included) in the ST of $85,300\ s^{-1}$ measured experimentally at Trojan for the test 20 sample (pH 6.5) collected on October 4th. Note that the ST measured for the test 20 sample covers the contributions of alkalinity ($52,800\ s^{-1}$), nitrite formed and reacted during the ST determination (observed NO_2^- residual was quantified $\sim 90\ \mu g/L$, i.e., much more was formed during the UV/AOP) and of initial organic compounds originally present in the well blend ($\sim 10,000\ s^{-1}$) and added to the sample (e.g., 1,4-dioxane; $ST\sim 6,360\ s^{-1}$). This highly simplified interpretation of the available data indicates that (1) nitrite was likely present in the well blend used for tests 7 and 8, and (2) presumably, there was a variation in nitrite concentration in the well blend used in the tests of October 4th over time. Trojan has calculated that a ST value of $144,750\ s^{-1}$ entered into the UV PLC would have resulted in the contaminant LRs exceeding the operating target (i.e., 1.32 LR for 1,4-D & 1.27 for PCE) for runs 7 and 8. If this increased ST value (i.e., $14,750\ s^{-1}$) were to be explained by an increased nitrite concentration then that would only require an additional $19\ \mu g/L$ of NO_2^- -N. Therefore, based on the measured nitrite concentrations, it is feasible that variable nitrite levels in the UV influent water could explain the lower treatment efficiency observed for tests 7 and 8. As previously stated, typical operation of the greensand filters will involve injection of sodium hypochlorite upstream of the filters and this would eliminate any contributions to the ST due to nitrite in the groundwater—i.e., the ST under the same feed water quality conditions would be proportionally lower (and hence performance would be higher).

6 CONCLUSIONS & RECOMMENDATIONS

This report documents the on-site performance tests for the TrojanUVFlex200 AOP system installed at the Santa Monica Arcadia Water Treatment Plant. All tests were completed with combinations of wells SM-8 and SM-9 and using UV Train 2. Whereas the test matrix states that UV Train 1 will be tested an issue with the Train 1 outlet valve control resulted in the switch to test Train 2. The design and performance of the two parallel trains are considered to be identical, which is the basis for only testing one train. The background UVT (i.e., pre- H_2O_2) of the tested water ranged from 93.0% to 98.7% and the UV influent H_2O_2 concentrations ranged from 22 to 39.7 mg/L. 1,4-dioxane log reductions from 1.1 to 3.75 were demonstrated, along with PCE log reductions of 1.06 to >2.03 and TCE log reductions of 1.73 to >1.91.

The key conclusions drawn from the performance test are:

- The specified water quality and operating conditions as defined in the test matrix were met for each test. Specifically, the measured flow rates were all within the acceptable range; the measured UV influent background UVT values were within the expected range; the measured UV influent H_2O_2 concentrations were all less than the maximum allowed; 1,4-dioxane was spiked sufficiently to produce effluent concentrations above the MDL for all tests; and the measured UV influent STs were less than the PLC-entered design value.
- The test results clearly demonstrate that the TrojanUVFlex200 UV-AOP system is capable of meeting the guaranteed treatment criteria at the design operating conditions,

as summarized in Table 2-1. Specifically, tests 1, 2 and 3 were all operated at the design conditions and at 84% BPL to simulate the lamp output at the EOLL value of 0.86 and the measured 1,4-dioxane LR values averaged 3.6, which significantly exceeded the design LR of 2.4. These test conditions also treated the ambient concentrations of PCE and TCE to less than the MDL. While ambient TCE concentrations were sufficient to demonstrate LRs at least as high as the design LR, PCE concentrations were not high enough to show this. However, Trojan's kinetic model is able to provide conservatively predicted LRs for both PCE and TCE based on the measured LR of 1,4-dioxane. Those predicted PCE and TCE LRs were shown to exceed the required treatment at the design conditions.

- Results presented demonstrate how the system accurately calculates UV influent UVT from the sum of the measured background UVT and the UV absorbance contribution from injected H₂O₂. Similarly, it was also demonstrated that the calculation of the UV effluent UVT based on the sum of the measured background UVT and the absorbance contribution from the predicted residual H₂O₂ concentration is slightly conservative due to a slight increase in the background UVT across the reactor.
- The results demonstrate that the measured and PLC-calculated UV influent and effluent H₂O₂ concentrations are in good agreement.
- The measured 1,4-dioxane LR values exceeded the operating LR setpoints for all tests for which the 1,4-dioxane compliance LR target was either the design value of 2.4 or the reduced value of 1.8. For those runs with a 1,4-dioxane compliance target of 1.2 LR, 3 of the 4 runs demonstrated 1,4-dioxane LRs that met or exceeded the compliance LR setpoint. Test 14 did not meet the compliance target and was performed at a reduced pH for which it is suggested that the ST entered into the PLC was underestimated. Trojan has calculated that a ST value of 112,500 s⁻¹ entered into the UV PLC would have resulted in the contaminant LRs exceeding the operating target (i.e., 1.32 LR for 1,4-D & 1.27 for PCE) for those two runs. Therefore, if the plant controls the UV influent pH to 6.5 or less then it is recommended that a ST value of 112,500 s⁻¹ be entered into the UV PLC.
- The measured 1,4-dioxane and PCE LRs for tests 7 and 8 were also lower than their respective operating target setpoints. Evaluation of the greensand influent water at 9:17 AM on October 4th reveals the presence of an estimated 50 µg/L NO₂⁻-N as reported by Weck. Trojan has calculated that a ST value of 144,750 s⁻¹ entered into the UV PLC would have resulted in the contaminant LRs exceeding the operating target (i.e., 1.32 LR for 1,4-D & 1.27 for PCE) for runs 7 and 8. If this increased ST value (i.e., 14,750 s⁻¹) were to be explained by an increased nitrite concentration then that would only require an additional 19 µg/L of NO₂⁻-N. Therefore, based on the measured nitrite concentrations it is feasible that variable nitrite levels in the UV influent water could explain the lower treatment efficiency observed for tests 7 and 8. However, since typical operation of the greensand filters will involve injection of sodium hypochlorite upstream of the filters, this would eliminate any contributions to the ST due to nitrite in the groundwater. Therefore, the design ST value of 130,000 s⁻¹ is considered to be conservative during normal plant operation.

- Although 17 of 22 UV effluent PCE concentrations were less than the MDL, the predicted PCE LRs based on the measured 1,4-dioxane LRs exceed the operating setpoint for those 17 tests. Only tests 14 and 15 performed at the reduced pH had measured PCE LRs below the compliance target due to underestimated ST value entered into the PLC, as discussed above. The overall conclusion regarding PCE treatment is that the compliance LR target will be met when the correct ST value is entered into the PLC.
- Similarly, although most UV effluent TCE concentrations were less than the MDL, only tests 9 and 10 were not able to definitively demonstrate that the compliance target was met because the influent TCE concentrations were too low. However, the conservatively predicted TCE LRs based on the measured 1,4-dioxane LRs exceed the operating setpoints for those all tests except tests 14 and 15. For tests 14 and 15, the measured TCE LRs were shown to significantly exceed both the predicted LRs and the operating targets.
- The overall agreement between measured and model-predicted contaminant LRs provides a high level of confidence in the ability of Trojan's UV/H₂O₂ AOP control algorithm to accurately predict performance and ultimately to control the system to meet the target contaminant treatment objectives when the system is operated in automatic log reduction-based control.

Overall, the TrojanUVFlex200 AOP performance test results described in this report demonstrate that the system is properly designed to meet and exceed the guaranteed contaminant treatment objectives. The data presented has also shown that select calculations used for the automatic control system are accurate based on measured results, and this provides confidence that the system can reliably operate over a broad range of flows, water qualities and treatment targets.

7 REFERENCES

Bader *et al.*: Photometric method for the determination of low concentrations of hydrogen peroxide by the peroxidase catalyzed oxidation of N,N-diethyl-p-phenylenediamine (DPD). *Water Res.* **22** (9), 1109-1115, 1988.

Buxton *et al.*: Critical Review of Rate Constants for Reactions of Hydrated Electrons, Hydrogen Atoms and Hydroxyl Radicals ($\bullet\text{OH}/\bullet\text{O}^-$) in Aqueous Solution. *J. Phys. Chem Ref. Data* **17**, 513-886, 1988.

Gerrity *et al.*: Emerging investigators series: prediction of trace organic contaminant abatement with UV/H₂O₂: development and validation of semi-empirical models for municipal wastewater effluents. *Environ. Sci.: Water Res. Technol.* **2**, 460-473, 2016.

Keen *et al.*: Identifying the factors that influence the reactivity of effluent organic matter with hydroxyl radicals. *Water Res.* **50**, 408, 2014.

Kim *et al.*: Occurrence of Unknown Reactive Species in UV/H₂O₂ System

Leading to False Interpretation of Hydroxyl Radical Probe Reactions. *Water Res.* **201**, 117338, 2021.

Kwon *et al.*: Prediction of the removal efficiency of pharmaceuticals by a rapid spectrophotometric method using Rhodamine B in the UV/H₂O₂ process. *Chem. Eng. J.* **236**, 438-447, 2014.

Lee Y. and von Gunten U.: Oxidative transformation of micropollutants during municipal wastewater treatment: comparison of kinetic aspects of selective (chlorine, chlorine dioxide, ferrate^{VI}, and ozone) and non-selective oxidants (hydroxyl radical). *Water Res.* **44**, 555-566, 2010.

Rosenfeldt E.J. and Linden K.G.: The $R_{OH,UV}$ concept to characterize and to model UV/H₂O₂ process in natural waters. *Environ. Sci. Technol.* **41**, 2548-2553, 2007.

Rosenfeldt E.J.: Rapid method for measuring background hydroxyl radical scavenging for impacts on design of advanced oxidation processes. *Proceedings of AWWA Water Quality and Technology Conference and Exhibition*, November 14-18, Savannah, GA, USA, 2010.

Stefan, M.I. (ed): *Advanced Oxidation Processes for Water Treatment*, IWA Publishing, 2018.

Zhou X. and Mopper K.: Determination of photochemically produced hydroxyl radicals in seawater and freshwater.

Wang *et al.*: External Standard Calibration Method to Measure the Hydroxyl Radical Scavenging Capacity of Water Samples. *Environ. Sci. Technol.* **54**, 1929, 2020.

Watts, R.J. and Teel, A.L.: Hydroxyl radical and non-hydroxyl radical pathways for trichloroethylene and perchloroethylene degradation in catalyzed H₂O₂ propagation systems. *Water Res.* 159, 2019.

This page intentionally left blank.

